

STORAGE

THE PRACTITIONERS' MONTHLY.

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EDITOR:
FRANK BURR TIBBALS, M. D.

COLLABORATORS:
A. W. IVES, M. D. JOSEPH SILL, M. D. FEB 20 1903 HARTZ, M. D.

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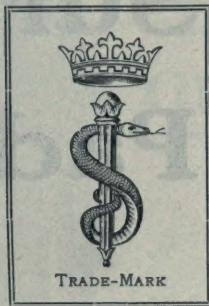
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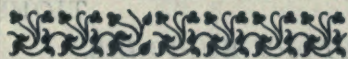
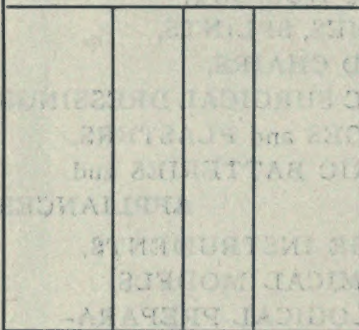
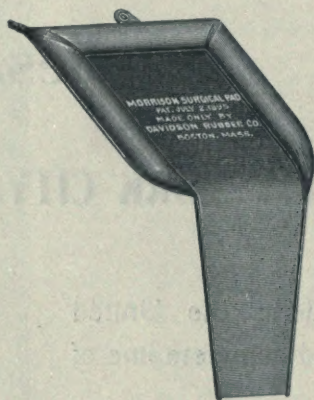
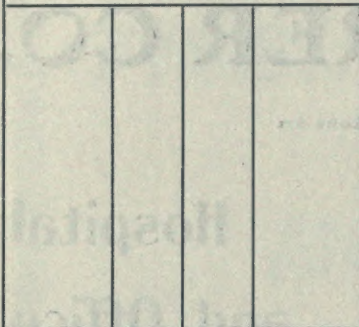
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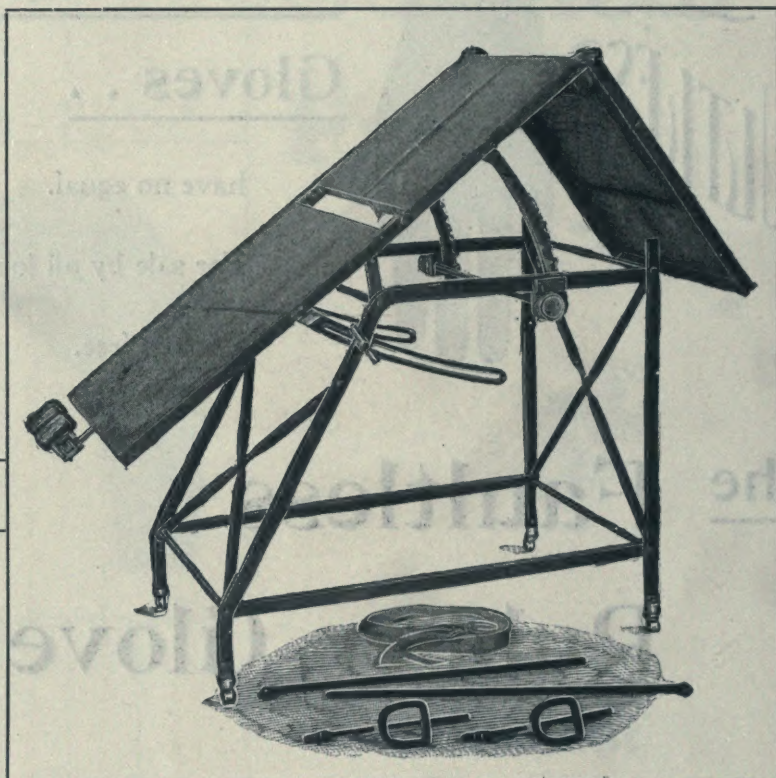
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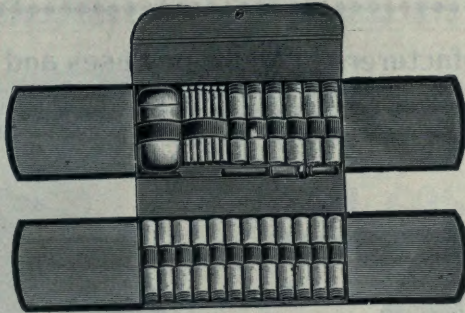
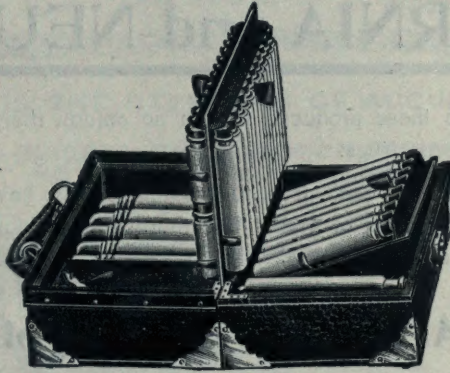
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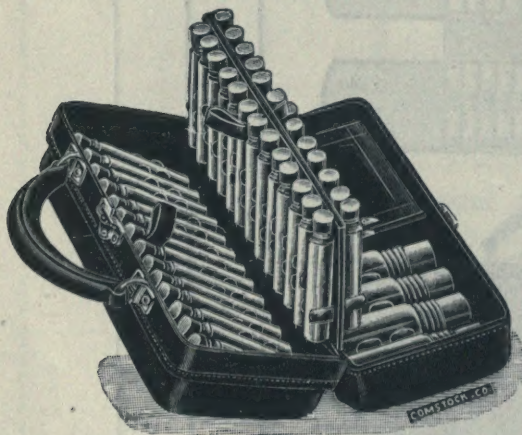
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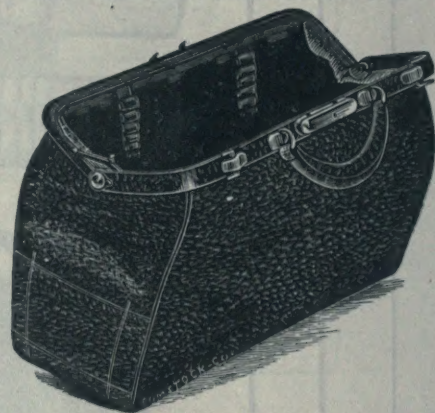
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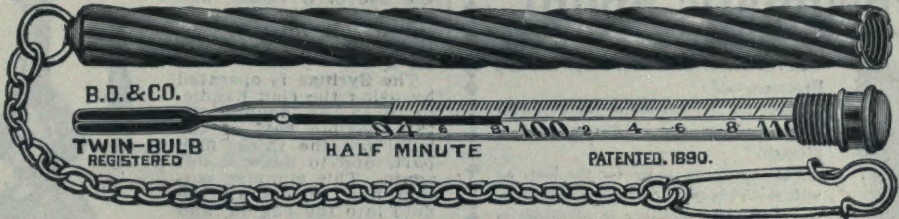
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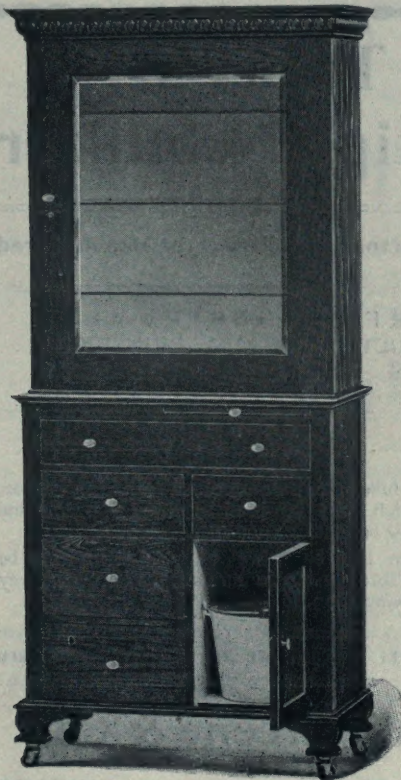
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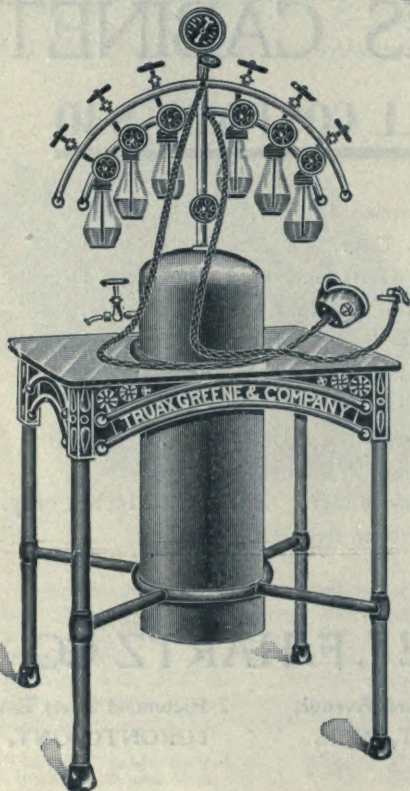
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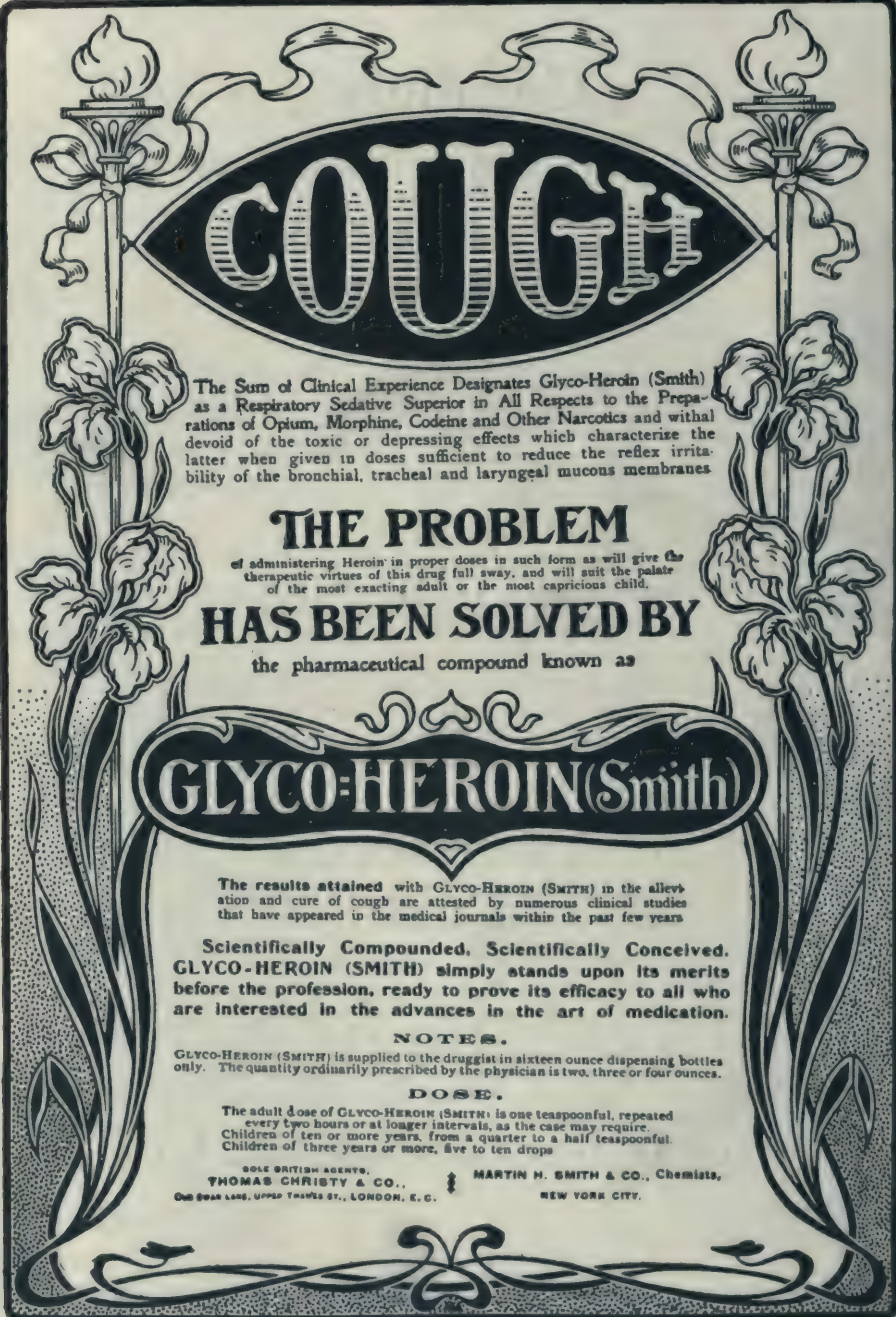
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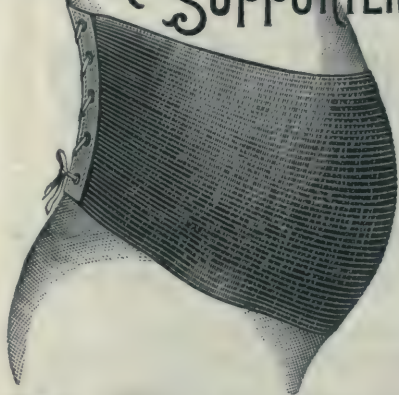
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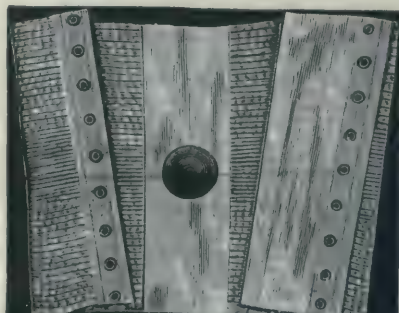
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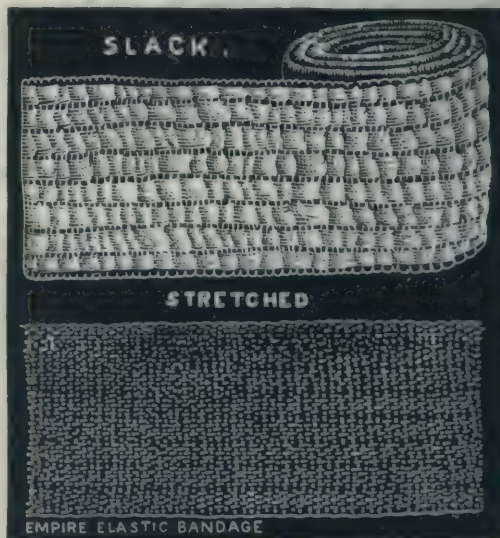
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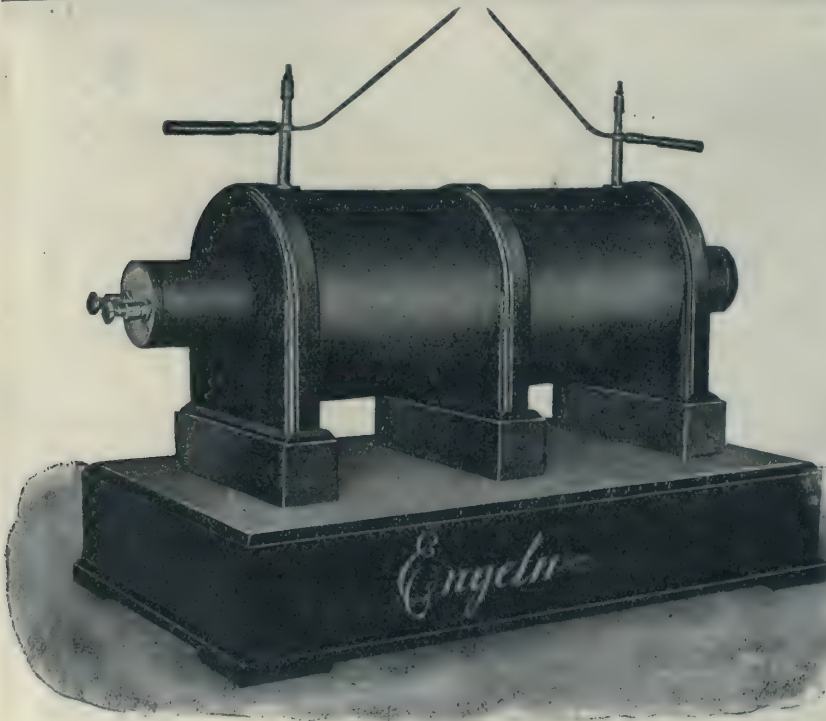
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THE PATHOLOGY AND DIAGNOSIS OF OTITIS MEDIA INSIDIOSA, i. e. SCLER- OSIS; WITH REMARKS ON THE TREATMENT.

BY HENRY J. HARTZ, M. D.,
Detroit, Mich.

In the last ten years considerable progress has been achieved in microscopic research into the diseases of the ear. Our knowledge of pathology has been enhanced more especially through the improved methods of decalcifying, embedding and staining microscopic sections. In the middle of the last century but little definite knowledge existed of the histopathologic states of the finer structures of the labyrinth, and the diagnosis and treatment of ear diseases was dependent largely upon microscopic and clinical observation. The first pathologic condition of the stapes was demonstrated by the anatomist Morgagni, who discovered that a bony deposit caused a complete fixation of the stapes. The clinicians of that early period regarded ankylosis of the stapes as the cause of progressive deafness and considered it to be incurable. Later writers attributed this form of progressive deafness to some lesion of the acoustic, and the designation of "nervous deafness" was introduced. The gradual development of laboratory research and the methods of making functional examination enabled aurists of the last century to diagnose ear diseases and class them, broadly, into affections of the sound-perception and sound-conduction apparatus. The Toynbee collection of specimens and the labors of Politzer, Moos, von Troeltsch and many others, revealed the fact that the majority of dis-

eases of the ear reside in the sound-conducting channel, and many cases of the nervous deafness of the older writers were classed with middle ear disease. Within the last ten years new light was furnished through laboratory and clinical research of Politzer, Katz, Bezold and Siebenmann on the pathology of the disease variously known as sclerosis of the middle ear, dry middle ear catarrh, chronic progressive deafness and otitis media insidiosa.

The term sclerosis was selected by von Troeltsch on clinical grounds, having for its anatomic basis only that the mucous membrane of the tympanum and the ear drum appeared sclerotic. It was held that an interstitial inflammation of the mucous membrane of the tympanic cavity initiated this sclerosis, which by extension involved the chain of ossicles, the oval and round windows. The rigid and dense condition of the membranes was regarded as obstructive to the transmission of sound waves. The disease presented clinically a high degree of deafness with pervious Eustachian canals and normal tympanic membranes. The new findings revealed that the lesions consist not so much of sclerotic conditions of the membrane and ossicles, but rather of a hyperplasia of the bony elements of the capsule of the labyrinth. This osseous process may localize itself to affect simultaneously the cochlea and the ossicular chain, and may also extend to the semi-circular canal. The osseous change begins primarily within the bone, independent of middle ear disease, and is allied to that form of disease first described by Politzer

as primary capsulitis labyrinthi. This author discovered this pathologic change by autopsy in subjects of advanced age.

Other investigators affirm what Politzer suspected—namely, that capsulitis labyrinthi may begin at an early age and progress slowly to complete fixation of

ization is in that part of the ear that is most active—namely, the articulation of the stapes with the oval window.

When confined to the labyrinth this hyperplasia may by its exostoses, much like a neoplasm, affect the integrity of the acusticus in a mechanical way, and induce



Fig. 1. Horizontal section through the labyrinth in region of stapes and upper portion of cochlea.—Slebenmann.

G—Acusticus.
H—Facial nerve.
I—Stapes (ankylosed).
J—Stapes, foot plate (ankylosed).
K—Hyperplastic bone.
L—Vestibule.

A—Tenor tympani.
B—Capsule of cochlea.
C—Normal bone.
D—Central axis of cochlea.
E—Ganglionic canal.
F—Hyperplasia of bone.

Patient was a physician 46 years old. Deafness in both ears at his twentieth year. Father and two brothers deaf. No history of otitis media. Some vertigo and tinnitus.

Diagnosis in vivo: Nervous deafness.

Watch heard 1 cm. on right side.

Watch heard 1 cm. on right side by pressing only.

stapes in the adult. A place of predilection for this osseous formation exists wherever there are deposited cartilaginous elements, as in the compact bone of the capsule, the posterior half of the oval window, at the point of articulation with the stapes, the upper and the lower wall of the cochlea and in any of the semi-circular canals. The most frequent local-

ization is in that part of the ear that is most active—namely, the articulation of the stapes with the oval window.

Watch heard through bone clearly from all points.
Microscopic Finding Hyperplasia of capsule of labyrinth with exostoses in pelvis ovalis. Bony fixation of stapes on vestibular side. Hyperplasia of the cochlea, capsule, with proliferation of the perineural and perivascular connective tissue in the lower basal turn of the cochlea.

the symptoms of nervous deafness. See Fig. I.

Its localization in the ossicular chain causes either partial or complete fixation, or dislocation of the stapes. Illustrations of this condition are Figs. II., III. and IV.

In two out of the twenty autopsies that have thus far been made, was revealed a simultaneous involvement of the sound-

perceiving and the sound-conducting apparatus. Siebenmann first demonstrated this combination in the semi-circular canal, and cochlea and the ossicles, the case, in vivo, presenting the clinical picture of nervous deafness. The functional

semi-circular canal. The acousticus was found to be without a lesion. The stapes was partially ossified and dislocated, as shown in Fig. 7.

Pathology.

The osseous process may be divided

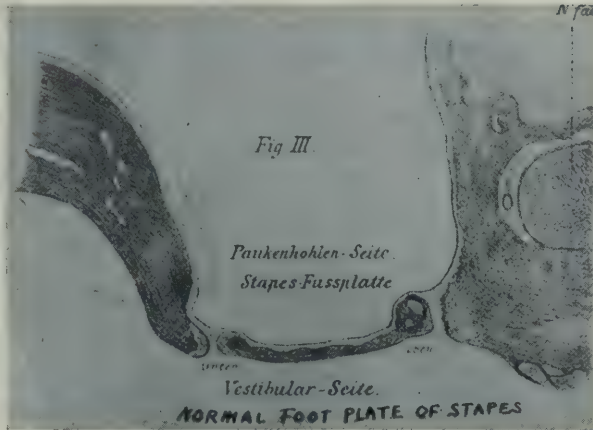
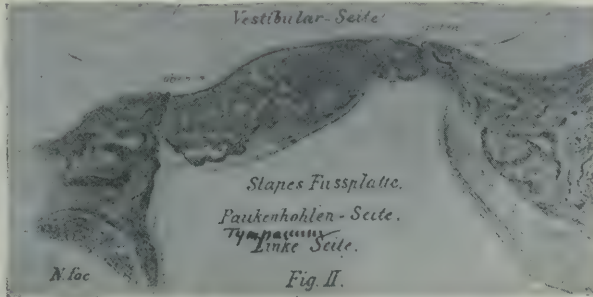


Fig. 2. Vertical section through foot plate of stapes. (Bezold.)

Male 24 years old, deaf in both ears since seventeenth birthday. Brother and sister likewise deaf.

Diagnosis in viro Sclerosis.

The functional examination revealed the following:

Schwabach's test, A fork, prolonged 19 seconds.

Rinné test, a' fork negative

R. 9 seconds.

L. 10 seconds.

Lower tone limit

R. c. 64 V.

L. F. 85 V.

Whisper

R. 6 cm.

L. 25 cm.

Microscopic Finding Hyperplasia of bone of foot of stapes. Ankylosis of stapes. Labyrinth and tympanic cavity are normal. Fig. iii shows normal size of foot plate for comparison with Fig. ii, which is five times enlarged by the osseous formation.

test showed diminished bone conduction. Vertigo without vomiting (necessitating lying down) was exhibited by the patient, being an evidence of involvement of the

into two stages, the first of which consists in an active proliferation of all the cellular elements within the bone. New vascular and cellular tissue is formed in

the marrow spaces and in the Haversian canals. Among the new formed bone cells may be found giant cells, under the influence of which the basement of the bone substance is principally absorbed. Hollow spaces are formed, and areas of erosion gradually undermine the originally compact bone, which becomes traversed by irregular and abnormal channels. Simultaneous to the absorptive process there is formation and apposition of new bone, but which is unlike the original, being more voluminous and porous. The second stage is ushered in when the progressive changes cease and when the new bone assumes a lamellar structure. Then the abnormally large and thick bone

corpuscles are found concentrically arranged, and the nucleus of these later undergoes atrophy. The vascular system is likewise gradually altered by the formation of connective tissue, in which at times may be found fat-cells. The Haversian canals and spaces have been changed in structure by this resorptive and appositional process, and all the cartilaginous elements have been metamorphosed into osseous tissue, as it cannot be found in the new growth. Thus the process constitutes not only a hyperplasia and hyperostosis, but also a metaplasia.

The new structure differs from the normal by its affinity and greater absorp-

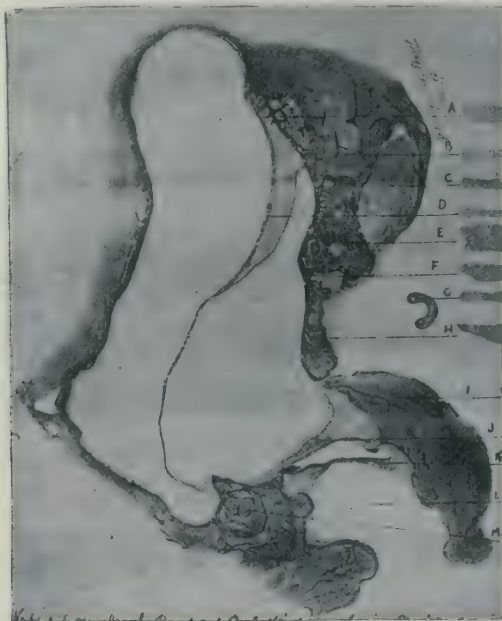


Fig. 3. A vertical section through the round and the oval window.—Siebenmann.

A—Utriculo-ampullaris nerve.
B—Normal bone.
C—Facial nerve.
D—Macula utriculii.
E—Hyperplasia of bone.
F—Ankylosis of stapes.
G—Caput stapedis.

H—Thickened foot plate of stape.
I—Promontory.
J—Lamina spiralis.
K—Tympanic membrane second.
L—Niche of round window.
M—Ampullaris posterior nerve.

Patient was 60 years old, totally deaf on both sides; began during exposure in war at age of 25 years. Functional examination was not made. Hyperplasia of the capsule of the labyrinth involving the

stapes with incomplete ankylosis. The upper margin of the oval window has a bony union, whereas the lower margin is free. The plate of stapes is much thickened.

tive power of carmine stains, which fact is utilized in the differential diagnosis. The microscopic evidences of this new formation are the osteophytes, situated usually near the stapes articulation. Frequently the stapes is partially absorbed by penetrating blood-vessels and replaced

upon an invasion of this bone-formation into the cochlea and the semi-circular canals, may permit a change in the pressure and the density of the labyrinth fluid. The mechanical and physical qualities of the endo- and peri-lymph may be so altered as to interfere with the nutrition



Fig. 4. Horizontal section through ankylosed stapes and hyperplastic bone of the capsule of labyrinth, —Katz.

A—Foot plate of stapes.
B—Hyperplasia of bone reaching to endosteum
C—Hyperplastic bone involving the foot plate of stapes, causing complete ankylosis.

D—Vestibular nerve.
E—Vestibule.
F—Facial nerve.

The above specimen was obtained from a woman of 39 years of age, who was very deaf, suffering from tinnitus. She had never had otitis media, but had

been affected with rheumatism. Family history and functional test were unobtainable.

by osseous formations. Sometimes a dislocation of the stapes is produced by an encroachment of the osteophytes. The function of the oval and round window may also be seriously interfered with by the hyperostosis producing partial or complete occlusion. When the process invades the tip of the cochlea, the patency of the Eustachian tube is threatened. Its lumen is narrowed by thickening of the periosteum, as was demonstrated by the microscope. Owing to the great vascularity which attends especially the first stage of this process, it is probable that the distressing tinnitus of progressive deafness may have its origin in the increased capillary circulation.

The structural alteration consequent

of the parts and induce disease. The detonating sounds heard by some patients and the complex of symptoms of Meniere may be ascribed to a perforation of the septum, dividing the endo- and the perilymph systems.

While the histologic alterations were found to be identical by different authorities, yet their designation of the bone-hyperplasia differs and new synonymous terms are consequently introduced. Politzer defines it as capsulitis labyrinthi or oto-sclerosis. Siebenmann, noting the resemblance to sponge by its rarefied spaces and porous structure, designated the new formation as spongification. Katz compares the process to Volkmann's osteitis vascularis chronica. From personal ob-

servations of different specimens the osseous change appears to be identical with the rarefying osteitis of our textbooks.

Etiology.

The etiologic views also differ. Siebenmann regards the disease as probably a resorptive or physiologic process of ossification of cartilaginous tissues. He does not look upon it as an osteitis, but rather as a final development process, which normally does not take place in the temporal bone, though it is the rule in other bones. Bezold believes that the pure cases of sclerosis are not due to catarrhal diseases (although the two may co-exist).

The diatheses of inflammatory rheumatism, gout and scrofula are regarded as predisposing to this bone formation, also the diseases of the naos-pharynx, such as diseased tonsils and adenoids. The theory that a metamorphosis of cartilage into bone may induce the hyperplasia, is strengthened by the fact that Virchow admits the possibility of formation of bone out of cartilage. It is highly probable that the calcareous deposits and other products of inflammation, such as synechia and adhesions may, by their irritation, incite this metamorphosis to activity. Sudden climatic changes and exposure to wet, likewise injuries, such as a fall from a horse, have been associated with the beginning of this disease. It has been frequently observed that the sclerosis is not always a progressive deafness; it may remain stationary and the individual have sufficient hearing-power for social or business intercourse. The microscopic records show that the nerves supplying the bone have always been normal—a fact which will contradict the theory that a trophoneurosis induces the bone disease. In most cases examined the membrane of the tympanum was found thickened, the result of the active hyperemia which accompanies this pro-

cess in its first stage, no evidence of round cell infiltration was found. But in very few cases was it discovered that the bone hyperplasia was the sequel to middle-ear suppuration. The search for bacteria as causative factors proved negative. Clinical observation and autopsy records affirm that capsulitis labyrinthi may begin at an early age, and that its duration may be from three to thirty years. The fact that more women than men are afflicted suggests that pelvic diseases may act predisposingly to progressive deafness. Seventeen per cent. are first affected with the disease at the time of puerperium, this fact suggesting to several authorities the justifiability of committing an abortion in those subjects affected with progressive deafness, as a prophylactic procedure. Dr. Blake has observed a hyperemia of the promontory in the region of the niche of the oval window in young women, occurring periodically with menstruation and in those subjects affected with erosion of the cervix, malposition of the uterus and other pelvic abnormality, upon correction of these abnormal conditions, the hyperemia disappeared and an improvement of the hearing followed. It is conceivable that a long continued congestion, reflexly induced by pelvic disease in the sensitive region of the niche of the oval window, may incite not only a connective tissue but also a bony hyperplasia. Statistics show that about 10 per cent. of all middle-ear diseases are true sclerosis, and this group, according to new discoveries, results as a consequence of a bony or calcareous formation. The fact that the disease affects both ears uniformly, would lead to the conclusion that a constitutional diathesis plays a certain roll. The Toynbee collection of 1,100 pathologic specimens contained many that exhibited depositions of calcareous material, and since then the investigations have shown that the gouty diathesis is an important

factor. Several cases were reported as occurring consecutive to inflammatory rheumatism, which revealed the identical pathologic changes of arthritis deformans, in the stapes articulation.

Diagnosis.

The diagnosis of capsulitis labyrinthi is made by the exclusion of the other forms of progressive deafness, the objective signs, the subjective symptoms and the functional test with tuning forks. This group, then, may be recognized by the

tympanic cavity unobstructed to air and free from secretion. The objective signs scarcely show a departure from normal conditions, and do not indicate the high degree of deafness which is usually present. This fact led an author to the facetious definition that sclerosis is a disease in which the physician sees nothing and the patient hears nothing. Fortunately, the subjective symptoms, the family history and the functional test with tuning forks are of great diagnostic value,



Fig. 5. Hyperplasia of semicircular canal and cochlea.—Siebenmann.

A—Superior semicircular canal.
B—Posterior semicircular canal.

C—Lateral semicircular canal.
D and E—Ankylosis of canal.

familiar sign of sclerosis, such as normal tympanic membrane (with perhaps diffuse or circumscribed opacity). The handle of the malleus may be slightly retracted, but is not rotated upon its axis. Now and then a red area is visible through the tympanic membrane, which is indicative of hyperemia in the region of the promontory, serving as strong corroborative evidence. Inspection of nose, pharynx and mouth of Eustachian tubes reveals normal conditions. The auscultation by catheter demonstrates that the Eustachian tubes are pervious, and the

enabling the careful aurist to recognize sclerosis, even in its early stage.

The subjective symptoms are high degree of deafness, usually of both ears and of insidious origin, more often between the ages of 20 and 35. Some acute pain and sensation of pressure and numbness around the head is felt. Persistent and distressing tinnitus, accompanied at times by detonating noises and some vertigo. Paracusis Willisii is nearly always present. Inheritance plays an important role in this group. In half of this group, some immediate member of the family is affect-

ed, seventeen per cent. originating at the puerperium.

It is important for diagnosis to eliminate all other forms of progressive deafness, such as arise from industrial pursuits; the constitutional anomalies, such as leukemia and hereditary syphilis, like-

immobility of the tympanic membrane, as seen with the otoscope, also the history of the patient and the absence of paracusis Willisii. These factors, together with an improvement of the hearing upon inflation, will aid in the differential diagnosis.

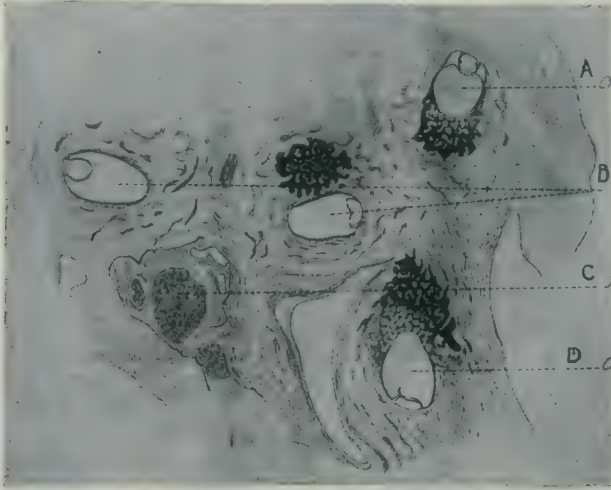


Fig. 6. Hyperplasia of semicircular canals, showing areas of rarefaction.—Siebenmann.

A—Posterior canal.
B—Lateral canal.

C—Facial nerve.
D—Posterior canal.

wise the deafness following the acute and chronic infectious diseases; neoplasm of the tympanic cavity, and also the nervous diseases implicating the acusticus. The deafness of old age is also to be excluded, as it is not due to an osseous formation, but rather to an atrophy of the acusticus. Most important is the exclusion of catarrhal and suppurative diseases of the middle ear and Eustachian tubes, since relatively the same functional test applies to them. The objective signs of the suppurative class, in contradistinction to sclerosis, are marked, except when co-existent. These are the retraction of the tympanic membrane, the handle of the malleus being rotated upon its axis, the evidences of former inflammation and suppuration, which may be adhesions, a cicatrix, a perforation of the drum-membrane, or calcareous deposits. The

Functional Test.

By the functional examination with the tuning-fork, we are enabled to measure the intensity and duration of a given tone. Through two avenues, by air and bone, may be discovered diseases of either the sound-conduction or the sound-perception apparatus. It will be remembered that the human ear is capable of perceiving a note as low as twelve vibrations per second, but the average normal low-tone limit is C₂, the equivalent of sixteen vibrations per second, while the highest note heard by the normal ear is g⁸, or the equivalent of about 50,000 vibrations, comprising in all eleven octaves of tone. Experiments prove that the chain of ossicles and drum-membrane are requisite for the conveyance of the lower tones, the higher notes finding more ready ingress through the bone-channel. Through the

agency of antagonistic forces, the sound-conducting apparatus, that is, the tympanic membrane and chain of ossicles, is held in a state of perfect equilibrium. This is accomplished by the musculus tensor tympani, the stapedius and the muscular fibres of the tympanic membrane, which together prevent excessive tension and relaxation. In consequence, the sound-waves are conveyed more effectually through the æreo-tympanic channel than the osseo-tympanic channel. A disturbance of this exquisite state of tension—as by closure of the eustachian

tubes, by adhesive bands, by perforation of the drum-membrane, or an osseous or membranous formation causing fixation of the stapes—will result in an alteration of the normal sound-conduction. That of the bone may exceed that of the air-channel. The extent of such interference with the function of the sound-conducting apparatus may be determined with the aid of tuning-forks. There exists in all cases of rigidity or fixation of the ossicles a defect in the perception of the lower tones by air-conduction. This defect of perfection may range from one-



Fig. 7. Hyperplasia in the region of oval window and stapes articulation.—Siebenmann.

A—Facial nerve.
B—Utriculo-ampullaris nerve.
C—Macula utriculi.
D—Upper portion of oval window, showing hyperplasia of bone with slight exostosis into the vestibule.

E—Hyperplasia of bone causing ankylosis of foot plate of stapes.
F—Tympanic membrane second.
G—Base of the stapes dislocated toward the tympanic cavity.
H—Promontory.

Figs. 5, 6 and 7 represent sections obtained from one subject in whom the hyperplasia affected simultaneously the stapes, the cochlea and the three semi-circular canals. The case was a woman aged 52, who had been deaf for five years. Father had also been deaf. She suffered from vertigo without vomiting and pain in ears. Tympanic cavity, drum membrane normal.

Diagnosis in vivo. Progressive nervous deafness.

Schwabach test shortened 10 seconds.
Rinné test, positive 25 seconds.

Whisper
R. 4 cm.
L. 150 cm.

Lower tone limit could not be determined owing to impending death.

Microscopic Finding Hyperplasia of bony capsule of the three semi-circular canals and cochlea, involving the foot plate of stapes. Formation of exostosis on vestibular and tympanic surface of the oval window, causing dislocation of the stapes on one side, while the other shows evidences of commencing ossification of the cartilaginous covering of the stapes.

half to one and a half octaves of the lower tones, depending upon the degree of deafness, while the bone-conduction is prolonged. The diseases of the cochlea, disturbing the sound-perception apparatus, are evidenced by the defective hearing of the high notes through air and by diminished bone conduction. The translations of the highest notes are supposed, according to the theory of Helmholtz, to take place in the lower region of the cochlea, in the narrowest portion of the basilar membrane. Hence, the locality and the extent of the disease may be estimated by the defect in the perception of high notes. With the aid of Schwabach's and Rinne's tests and the determination of the lower-tone limit, it may be ascertained whether or not fixation of the stapes exists. This can be almost positively shown by the Bezold triad test. These are, first, prolonged cranial bone conduction with an A fork; Rinne's test, shortened or negative, with a¹ fork; third, defect in perception of one-half to one and one-half octaves of lower tones. When the labyrinthian structure is exclusively invaded, the same test applied will react with almost opposite results. First, shortened cranial bone-conduction with a¹ or A fork; second, Rinne's test, positive or very little shortened; third, clear perception of nearly all lower tones; fourth, defect in hearing high tones. Thus, the same process may, according to the location, produce a bony ankylosis of the ossicles or nervous deafness, and may be diagnosed by the different tests. The accuracy of these tests cannot be questioned; diagnoses of stapes ankylosis and nervous deafness, made *in vivo*, have been sufficiently verified by autopsy examinations. In more than half of the cases the process was found localized on the vestibular side of the oval window, and affected the lower turn of the cochlea. The extent of the invasion of this part of the labyrinth may be determined by the defect in per-

ception of the high tones. An extensive co-existence of the bone formation in the ossicles and labyrinth renders the differential diagnosis almost impossible. In that event, they may be classified as dysacusis. In this category also belong the one-sided deafness, where the normal ear of the opposite side interferes with the examination of bone-conduction, and all such cases where insufficient data are obtained, as from children and the weak-minded. The term sclerosis is suitable when applied to the sclerotic condition of the mucous membrane of the tympanum, the oval and round window, but is insufficient when an osseous formation exists, as the latter is an increase rather than a decrease of tissue. A more precise definition would be capsulitis labyrinthi, complicated by either stapes fixation or nervous deafness. When a combination of both exists the case could be classified as simply deafness or dysacusis. The term spongification, introduced by Siebenmann, is as appropriate as capsulitis labyrinthi, but does not convey so precisely the point of origin.

Treatment.

The discovery that an osseous process, and not catarrhal disease, is the fundamental cause of sclerosis gives direction to our therapeutic efforts. The mechanical, the surgical and the medicinal treatment of sclerosis have been faithfully tried, but with unsatisfactory results.

The medicinal treatment of sclerosis, with a view of causing removal of the materies morbi obstructing the ossicles by the internal use of absorbents, such as iodine, mercury and phosphorus, has given only negative results. The most promising has been the use of phosphorus in small doses, administered for periods of six months during the year. The thyroid extract was given with some satisfactory results in the early stages of the disease, due probably to the absorption of the granular tissue, which precedes the osse-

ous formation. An early diagnosis of progressive deafness, predisposed by heredity, will permit of proper hygienic and medicinal treatment. The use of large doses of potassium iodid has been found efficacious in the hands of Politzer. The administration of potassium iodid should be continued for a period of three months, or longer, during the year. In cases where the rheumatic diathesis is a causative factor the use of solvents for uric acid is indicated.

Mechanical Treatment.

This consists of mobilization of the chain of ossicles, which, if not excessive, may temporarily benefit the hearing. This is brought about principally by transudation of serum, following massage, which facilitates the movement of the articulation of the ossicles. The effect of excessive pneumo-massage by the use of rarefacteurs is exerted principally upon the posterior segment of the tympanic membrane, the fibres of which become weakened, resulting in relaxation of the drum membrane. The condition induces not only increased tinnitus, but also a decrease in the hearing power. Pneumo-massage should be given only for one-half to one minute, twice or three times per week for one or two months. The patient should be advised to return after a period of two months for another course of pneumo-massage. Dr. Blake emphasized the necessity of gentleness in the use of the rarefacteur, as it is apt to provoke a misplacement in the whole chain of ossicles, more particularly a relaxation of the posterior segment of the drum head. When this condition exists, Dr. Blake resorts to an application of collodion to the relaxed portion of the tympanic membrane with the view of contracting the parts and thus restoring equilibrium.

Surgical measures, such as stapedectomy, excision of oval window and other procedures, have proven of temporary

benefit only. It was found that the trauma of the operation induced a migration of plastic material, which later organizes into a cicatrix and frequently renders the condition for hearing worse. Equally ineffective has been the local treatment, by forcing irritating substances, such as iodine, silver and solvent solutions, into the tympanic cavity. It has been condemned on the theory that the irritation produced an increased periosteal cell proliferation, an exception to this being when catarrhal disease and sclerosis co-exist. A prophylactic procedure is the removal of diseased tonsils in the pharynx and vault, upon the theory that suppurative processes induced primarily by the diseased tonsils are frequently followed by deposits of calcareous matter, which in later life may initiate ossification of cartilage in those subjects predisposed by heredity to capsulitis labyrinthi.

It is doubtful if the osseous hyperplasia of advanced sclerosis can be removed by any agent now at our command. The cell-stimulating and absorbent effects of the X-ray and the violet ray upon lupus and inoperable malignant tumors have led the writer to institute experiments with these agents in cases of sclerosis and chronic otitis media.

Summary.

1. Sclerosis is fundamentally a hyperplasia of the bony capsule of the labyrinth; the hyperplasia is a transformation of cartilage into bone, i. e., metaplasia, accompanied by formation of outgrowth of bone, i. e., hyperostosis.

2. It is initiated by constitutional diathesis, such as inflammatory rheumatism, gout, syphilis and scrofula, by diseased tonsils in the pharynx and vault, suppurations with calcareous deposits in the tympanic cavity, exposure to cold and wet and injury.

3. Its localization is usually in the labyrinth capsule near the stapes articulation with the oval window, inducing fixation of the stapes.

4. It may involve also the semi-circular canals and cochlea, to produce symptoms of nervous deafness.

5. It may affect simultaneously the sound-conduction and the sound-perception apparatus.

6. The functional test, the subjective symptoms and family history permit an early diagnosis of this disease. These are:

1. Hyperemia of promontory.

2. Heredity.

3. Schwanbach test reveals prolonged bone conduction.

4. Rinne's test is negative in varying degree.

5. Defective perception of one-half to one and one-half octaves of the low tones.

7. Probably ten per cent. of the middle ear diseases are true sclerosis and are designated synonymously capsulitis labyrinthi, oto-sclerosis, spongification, dry middle ear catarrh and otitis media insidiosa. The therapy is effective in early stages of the disease by hygienic and medicinal treatment. The more advanced cases may be improved by judicious treatment, with amelioration of the tinnitus.

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Tonsillitis Powder.—Good results have been reported from the use of acetanilid and sodium salicylate equal parts, well mixed and blown over the inflamed parts. Repeat every fifteen minutes until relief is experienced.—(*St. Louis Clinique*.)

Ancient Appendicitis.—And now a mummy of some 3000 years B. C. has the impertinence to prove that appendicitis was performed in those days and that then, as now, patients died from it even though the operation was successfully done.—(*Pacific Coast Journal of Homeopathy*.)

[Does the writer want us to believe that if the departed had been treated medicinally, the body would still be living? It seems scarcely reasonable. Ed.]

X-Rays and Honesty.—A Philadelphia firm, according to a press dispatch from that city, has received an order from the Japanese government for several X-ray machines, which are to be used for a novel purpose.

The firm some time ago sold to a representative of the mikado an X-ray machine, which, the Japanese explained, was to be used in the governmental mints in Japan for the detection of dishonest employes, who stole gold coins by swallowing them.

The machine was used to examine suspects as they left the mint daily, and of course it revealed the presence of any coins "in their midst." The test was so satisfactory that the mikado ordered several more machines, hoping to prevent the form of theft referred to.—(*Exchange*.)

Sugar As A Tonic.—The *British Medical Journal* says: "Keim and Lehmann observe that on the evidence of the activity of sugar in relation to muscular activity, shown by experiment, it has been believed sugar influences uterine contractions. They make out, however, that practically sugar only acts on uterine muscles after the contractions of labor have set in, and has no influence on the expulsion of the after-birth and on uterine retraction. They declare, as an interesting and instructive fact, that among professional consumers of sugar, such as women who work in refineries, labor is very short, and muscular force is maintained during the whole labor; indeed, the sugar acts on the muscular system of the entire body. In short, sugar is not only an oxytocic, but also a tonic influencing muscular energy."

Attractive Calendar.—The Denver Chemical Mfg. Co. has issued a pleasing folder, with the compliments of the season to its friends in the profession. The calendar is attractively printed in holiday colors, and is a very neat piece of work.

DOUBLE UTERUS AND COMPLETE VAGINAL SEPTUM IN A GIRL 24 YEARS OF AGE.*

BY H. W. LONGYEAR, M. D.,
Detroit, Mich.

The specimen which I here show you, that of an ovary and Fallopian tube, is not remarkable for any especial pathological quality—in fact, it is normal excepting for the remains of an old small hematoma in the ovary—but it is of considerable interest for the story which it tells. The patient, from whom I removed the specimen this morning, is the possessor of a double uterus and complete vaginal septum and has been under my care and treatment during the last four years.

When she first came under my observation, which was at the Woman's Hospital, she was twenty years of age, but as undeveloped in every way as a girl of fifteen or sixteen. She was then just beginning to menstruate, and came to me complaining of severe dysmenorrhœa. On examination, under anæsthesia, this interesting condition was discovered. The vulva was normal, the vagina was divided into two parts by a firm antero-posterior septum which extended from the introitus to the vault, where, on each side of this dividing membrane a cervix uteri was felt. On passing a sound along the finger into each os, it was found to be deflected well to the left on the left side, and to the extent of two and one-half inches, while on the right side it was deflected but little from the vertical line and the uterine canal was but two and one-quarter inches in length. Each cervical canal was thoroughly dilated and upon leaving the hospital the patient was directed to report occasionally for observation and further treatment.

She was not seen again by me until June 13, 1902, (about three years and a half after the dilatation), when she was

*Reported at the meeting of the Wayne County Medical Society, January 29, 1903.

sent to me by Dr. Samson, of Windsor. Her general development was then remarkably improved in every way. For several months she had had increasing severe pains at each menstrual epoch, beginning in the right hip, and later extending across the abdomen. On account of the limited room in the vaginal canal, due to the septum, bimanual examination was unsatisfactory, but a small unnatural mass could be felt in the region of the right ovary, which I decided to treat through an abdominal incision, and at the same time destroy the vaginal septum.

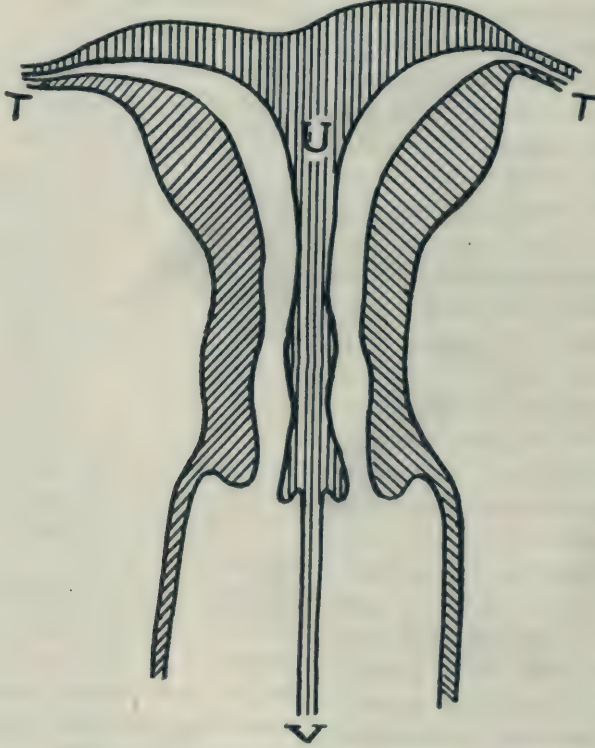
Accordingly, on June 14, the operation was performed at the Woman's Hospital. The septum was removed in the following manner: Its whole length was first grasped by two pairs of long pedicle forceps—one anterior and one posterior—from the vault of the vagina down, incised between the two with scissors, and the edges thoroughly cauterized with Paquelin cautery. On the removal of the forceps, no hemorrhage occurred. This left the cervices projecting into a fairly capacious vagina.

The abdomen was then opened, and a careful examination of the pelvic contents made. The double uterine body was nearly three inches in breadth, the right side being somewhat smaller than the left, with a slight indentation at the fundus, marking the junction of the two uteri. The left ovary and Fallopian tube were normal, the right tube was normal, but the right ovary was enlarged to the size of a hen's egg. The latter was removed and found to consist mainly of a hematoma.

Her first menstruation after the operation was while she was still in the hospital, and, much to my disappointment, was attended with the same old pain in the back of the right hip. This pain, Dr. Samson reports, had steadily increased in severity until now, regardless of various kinds of treatment, it had become a

menace to her life. Dr. Samson sent her to me again on Jan. 29, when, examination revealing no cause for the pain, I determined to remove the remaining ovary, and so bring on the cessation of menstruation. At the operation nothing was discovered, such as adhesions, or other malformation, to cause the pain, so that the supposition must be that it has been due

Practices for Sale.—We have two special and one general practice for sale. The two special practices include one oculist's office in the northern peninsula, and a practice devoted to nose, throat and ear in a large city, established eighteen years. The present holder will stay to introduce successor. Write us about these practices.



Bilocular uterus and vaginal septum; vertical section. U, Partition which divides the uterus into two halves; T, Tubes; V, Vagina divided by the uterine septum prolonged.

to some unnatural nerve supply or formation, occurring coincidentally with the other more apparent malformation.

At this operation it was noted that the right uterus, the side from which the ovary had subsequently been removed, had diminished considerably in size.

Note.—A bloody discharge from the uterus two days after the operation, caused the same pain in the hip, but somewhat less in severity, which ceased promptly with the cessation of the flow.

271 Woodward Ave.

The Chinese Idea of It.—The Chinese Penal Code provides that if death results as the consequence of administering drugs or the use of instruments contrary to established rules and practice, and if, upon investigation, the magistrate shall find that only an error can be charged, the physician or surgeon can obtain relief from the penalties inflicted for homicide, but that he shall forever be debarred from again engaging in the practice of his profession.—(*Medico-Legal Bulletin.*)

RABIES.*

BY JOSEPH SILL, M. D.,
Detroit, Mich.

During the last fall, rabies has been prevalent in Michigan to a degree unknown for many years. The frequency with which physicians in this state are called upon to deal with bites from dogs supposedly rabid, and the former rarity of the disease, made a brief discussion of rabies not inopportune.

Rabies has been recognized since very early times. Democritus of Abdera (460 B. C.) makes the first mention of it. Xenophon, Aristotle, and others of the ancient Greeks refer to it. Celsus describes it as "a most miserable kind of a disease, in which the sick man is at the same time tormented by a dread of food and water, in which condition hope is reduced to a narrow limit." But little of importance was added to our knowledge of this disease until Magendie and Bouchet in 1813 produced rabies in a dog by inoculations of the saliva of a rabid man. Pasteur was the first to put our knowledge of rabies on a sound scientific basis. Of his work I shall speak more fully later.

Climate and temperature have little to do with the prevalence of rabies. No part of the world is free from it. It was common in Greenland when the temperature was 25° below zero, and it is found in Egypt and Constantinople.

It is, I believe, a generally accepted idea that rabies is to be dreaded only during the hot summer months. I cannot too strongly protest against this. Rabies may and does occur at any season of the year. In fact there is reason to believe that hot weather prolongs the incubation period of the disease and may delay death. The following table from Suzor will show the error of believing that rabies is a summer disease. He reports:

During March, April and May.....	35 cases
During June, July and August.....	14 cases
During September, October and November	25 cases
During December, January and February	14 cases

*Written for the Detroit Medical Journal.

Keirle* reports three cases in man in December, one in January, and two in February. I can add one in September and one in January.

Apparently all mammalia are susceptible to rabies. At any rate their susceptibility to this disease is so general that an assertion that any variety is immune must be backed up with experimental proof to gain credence. With us it is most frequently seen in the dog, although it may be communicated to any of the other domestic animals.

In dogs the disease is seen in two forms, the so-called "furious" and "dumb" rabies. It must be remembered that both are the same disease, and that an animal bitten by another suffering from dumb rabies may develop the disease in the furious form, and vice-versa, and that dumb rabies is less dangerous than furious rabies, because animals suffering from the former show less inclination to bite than those afflicted with the latter, and not because it is a less virulent type of the disease.

The symptoms and course of rabies are quite characteristic in dogs. The disease may be divided into three stages. 1. Premonitory. 2. Furious. 3. Paralytic. When the three stages are present, we have the furious type of the disease, and when the second stage is either absent entirely or of such short duration as to attract little attention, the disease assumes the dumb or paralytic form.

The first thing one notices about a dog affected with rabies is a change of disposition. An affectionate animal becomes cross and irritable; one naturally vicious may become unusually affectionate. The dog seeks to escape notice. He will hide in dark corners and out of the way places. He becomes restless, and wanders about aimlessly, snapping and biting at what-

*I wish to express my obligation to Keirle's exhaustive essay on Rabies published in "Twentieth Century Practice of Medicine," vol. xv. It has been a mine of information.

ever comes in his path. He eats unusual and unfit things, and refuses what ordinarily tempts his appetite. The bark is hoarse and muffled. Gradually, paralysis of the lower jaw develops. There is hyper-secretion of a thick viscid saliva, which drips from his jaws. He is thirsty and laps eagerly at water and fluids, but is unable to drink. Paralysis of the hind legs gradually develops, and the dog trots with a curious wobbly gait. The eyes are red and inflamed, and the face wears a distressed and distrustful expression. The paralysis spreads, involving the abdominal muscles, and finally the whole body, and the dog crawls off to some obscure place and dies. The whole course of the disease is less than a week.

This is a picture of the disease in its complete form. The first stage may be absent, and the dog may become suddenly furious, or the first stage may be followed directly by the third, giving rise, as I have said, to the dumb or paralytic type of the disease. In Detroit, contrary to the general experience, most of the observed cases have been of the paralytic form. This accounts for the few cases seen in man, notwithstanding the large number of rabid dogs in the city.

There are two points in which this description of rabies in the dog differs from the generally accepted idea. These I wish to emphasize. The first is that the rabid dog does not avoid water. On the contrary he is thirsty, and laps it eagerly. He cannot drink, however, on account of the paralysis of his jaw, and of the muscles of deglutition. Hydrophobia is a misnomer, when applied to this disease in animals. The second point is that the rabid dog does not froth at the mouth. Saliva is secreted in excessive quantity, and drips from his jaws because of the same paralysis that prevents his drinking.

In man the manifestations are somewhat different. At first there may be some pain at the point of the old bite,

which has long since perfectly healed, and may have been forgotten. There may be numbness and vague parasthesia along the course of the nerves coming from the point where the bite was inflicted. The patient feels a dread of some impending evil, and is irritable, restless, and much depressed. Soon, taking a glass of water to drink, he finds he cannot. The attempt to swallow causes most violent and painful spasm of the muscles of deglutition. Soon the mere sight of food or drink produces contraction of these muscles, and the patient dreads the very sight of water. He has periods of wild delirium, in which he struggles with and upbraids his attendants for their thoughtlessness and lack of attention. The delirium passes away, and he is filled with regret for his violence and abuse. He is tortured with thirst and begs for water, but when it is brought he turns away from it with dread and horror. The respiration is labored, and he suffers from a sense of oppression and suffocation. There may be a hypersecretion of saliva, which the patient spits about the room, sometimes in the faces of his attendants. The periods of delirium become more violent and frequent, then gradually grow fewer and less violent, and the patient becomes more and more comatose and finally dies.

The contraction of the muscles may be slight or severe. It may be limited to those of deglutition or it may amount to a general convulsion of great severity, of the clonic or tonic type. The inability to swallow is occasionally incomplete, and may pass off shortly before death. The patient may suffer from hyperesthesia, and a breath of air, or an unexpected sound may be sufficient to produce a violent convulsion. The last stage of the disease, that of paralysis and coma, may be absent, and the patient may die directly after a convulsion. The duration of the disease is usually between one and four days.

The period of incubation is much longer than in any other infectious disease—eight days to eight months in the dog, and fourteen days to eighteen months in man. One or two instances of an even longer period than this are reported, but are not considered well authenticated.

One more point I wish to emphasize before taking up the subject of treatment. If a dog is suspected of being rabid, *and is known to have bitten no one*, it should be killed at once. If, however, a dog has bitten any person, or any other dog, it should not be killed, but should be kept under observation for two weeks, for the following reason: The saliva of a rabid dog becomes infective from three to eight days before symptoms of the disease develop. The course of the disease is not over a week. If the dog is alive and well at the end of two weeks, no fear of rabies need be felt. If, however, the dog dies, proper measures can be taken to prevent the disease in the person bitten. *Never kill or allow to be killed a dog that has bitten anyone.*

For the developed disease there is no issue but death. There is no curative treatment. All treatment must be preventive. Immediate and thorough cauterization greatly reduces the danger. Cauterization to be efficient must be both immediate and thorough. The actual cautery is best. When it is not possible, on account of the extent of the wounds to cauterize thoroughly, antiseptic solutions and water as hot as can be borne (130° F.) may be applied. These hot applications can with benefit be repeated for as long a time as three months. In all suspicious cases the patient should be sent at once to one of the Pasteur institutes, and the dog should be watched. All cases in which the epidermis is broken, even if it be the merest scratch, should be subjected to treatment.

The preventive treatment of rabies consists of rendering the patient immune to

the poison by gradually increasing doses of the virus, or by introducing into the body some substance that will render the poison inert. In general there are three ways of accomplishing this result. First, we may inject the serum of some animal rendered artificially immune to the disease. Second, we may inject the virus directly into the body of the patient, beginning with virus diluted very highly, and gradually increasing the strength; or, third, we may begin with a much attenuated virus, and gradually inject a more and more active preparation. The first may be called the indirect method of conferring immunity, and the two latter direct methods, for it will be readily seen that if we inject into the patient the serum of an animal rendered artificially immune, we must first immunize that animal by the same process, whereby, in the second and third methods, we accomplish that result in the patient.

Pasteur's method of treatment—that of conferring immunity by attenuated virus—being, so far as I know, the only one available in this country, deserves a fuller description. The others may be passed with a mere mention.

The virus of rabies is found in greatest amount in the brain and spinal cord of the animal affected, particularly in the medulla. Pasteur found that if a rabbit be inoculated subdurally with a small bit of the medulla of a rabid dog, the rabbit would die at the end of a period of about fifteen days. He also found that if a second rabbit be inoculated in the same way with the medulla of the first rabbit, the second rabbit would die after a slightly shorter time than did the first; that a third rabbit inoculated from the second would die after a slightly shorter length of time than the second, and so on, until, after many successive inoculations, he was able to kill rabbits in six days, and that this period could not be shortened by further inoculations. This virus, capable

killing rabbits in six days, is the so-called "fixed virus." This is of the utmost importance, for it is necessary for the purposes of treatment, to deal with a virus of known virulence, as that is the only way to accurately determine the dose, and as it is always necessary to keep a supply of fresh virus on hand, after it has once been fixed, rabbits can be inoculated indefinitely without increasing its power. It was further determined that after the spinal cord of one of these rabbits has been dried over caustic potash at a temperature of about 72° F. for fifteen days, it becomes practically inert. Thus we can obtain virus of any degree of virulence from that in the fresh cord to the practically inert virus fifteen days old. A cord that has been dried for fifteen days is known as a "fifteenth day" cord; one that has dried for fourteen days, a "fourteenth day" cord; one that dried for six days a "sixth day" cord, and so on. The treatment consists of injecting, into the anterior abdominal wall of the patient an emulsion made by rubbing up a bit of spinal cord with distilled water. For the first four days the dose is 3 cc. On the first day of treatment a fourteenth day cord is used; on the second day, a twelfth day cord; on the third day, a tenth day cord; on the fourth day, an eighth day cord. On the fifth day two injections of sixth day cord are given at the same time. The dose is now 2 cc. for the next two days, as follows: Sixth day, fifth day cord; seventh day, fourth day cord. On the eighth day an injection of 1½ cc. of a third day cord is given. The dose is now 2 cc. daily until the end of the treatment. Cords dried for less than three days are not used, so on the ninth day of treatment an emulsion of fifth day cord is given; on the tenth day, fourth day cord; on the eleventh day, third day cord. Then on the twelfth day, fifth day cord is again used. The treatment continues in this way until the end of twenty-one days.

The dose is not modified with respect to the age of the patient.

There is sufficient material for many treatments in a single spinal cord, but it is necessary to keep always on hand cords of proper age: i. e., at least one cord that has dried for three days, one that has dried for four days, and so on up to fifteen days. In order to do this it is customary to inoculate two rabbits each day. Since we are using a fixed virus, two rabbits will die each day, and the spinal cords must be removed. The keeping up of a supply of cords alone is a large amount of work, and requires no small degree of skill. This work must be carried on uninterruptedly. From the day a Pasteur institute is opened until it closes, two rabbits must be inoculated daily. This is what makes the Pasteur treatment so expensive. It is work requiring constant attention and great care, and the outlay for the single item of rabbits and their feed is large.

One more point. No time should be lost in submitting the patient to this treatment, for the treatment itself requires three weeks, and two more weeks must elapse before immunity is complete. As the disease most frequently develops about six weeks after the bite, there is little time to spare.

(To be continued.)

Bacteria Per Cubic Metre of Air.—Dr. W. Wayne Babcock, in the *Brooklyn Medical Journal*, gives the following table, quoted from Miquel, by Roger:

In the sea, at 100 kilometers from the coast.....	0.6
Altitude of 2,000 meters.....	3.
Summit of Pantheon.....	200.
Observatory of Montsouris.....	480.
Rivoli Street (in Paris).....	3,480.
New houses.....	4,500.
The air of sewers of Paris.....	6,000.
Old house.....	36,000.
Hotel-dieu (hospital).....	40,000.
Pitié Hospital.....	79,000.

HYDROGEN PEROXIDE.

Usually in my country practice I carry an eight-ounce bottle of hydrogen peroxide in my satchel. I use the product of a manufacture that is not advertised in lay journals; I do not carry a trade bottle for patients to gaze at, for I do not believe in taking the laity into my confidence as to treatment. The reader will see that I never lose a chance of reiterating the statement that it is folly to tell a patient what he is taking. I always keep a medicine-dropper handy, and with its aid I use the hydrogen peroxide in a thousand situations.

The child with the suppurating ear gets its with the dropper; the diphtheretic membrane gets it with the spray; the chronic ulcer of the leg I treat by providing the patient with an atomizer full of the peroxide, to be used *ad libitum*. Every kind of a sore requires it, and, if the condition is at all suggestive of erysipelas, a painting with pure ichthyol. Hydrogen peroxide will lift gunpowder out of a wound on the foam, and it has a similar effect on all kinds of dirt. Diluted, I have used it as an eye-drop and as a wash for the newly born. Of all the ways of using this agent, the most serviceable seems to be the spray. In this way it can be handled economically and just at the point where we want it; the projecting force actually helps us to rapidly undermine the pus.

For suppurating gums and stomatitis, I use it in frequent half-drachm doses, and in the white tongue and sweet breath of blood poisoning it should be used internally and locally almost without stint. It has never been my ill-fortune to treat many obstinate cases of diarrhœa; possibly I use the sulphocarbolates and large doses of calomel too extensively to allow many, but I am inclined to think that hydrogen peroxide by mouth and in enema would be very serviceable.

This is one of the preparations in my

experience that is constantly extending its usefulness over a larger territory of practice.

C. E. BOYNTON, B. S., M. D.,
Los Banos, Cal.

Good Work In Ohio.—The Ohio State Board of Medical Registration and Examination recently revoked the licenses to practice of two physicians of Columbus found guilty of attempting to produce a criminal abortion with fatal result. In view of the fact that practitioners convicted of such malpractice too often escape easily at the hands of the Court, the action of the Board deserves the support of all reputable physicians and is an example worthy of adoption by other State Boards having the power to revoke licenses.—(*Pennsylvania Medical Journal*.)

Ipecac In Pneumonia.—Perreau has introduced the following method of treating pneumonia: one gm. of powdered ipecac is mixed with 100 gms. of mucilage and one teaspoonful is given every hour for about eight hours, care being taken to avoid vomiting and diarrhœa by lengthening the dose intervals when necessary. The object of the treatment is to deplete the lung and as a consequence modify its tissue so that microbic infection may be counteracted. Satisfactory results are reported, especially if the method is employed early in the disease.—(*St. Louis Clinique*.)

The *Medico-Legal Bulletin* publishes an account of a German court's order fining a druggist \$50 and his assistant \$14, for having dispensed a physician's prescription to the same purchaser about 2,000 times. The nature of the prescription is not stated, but we incline to the belief that it must have contained malt in some form, and that the court was only taking another way of getting some license-money out of the pharmacist.

International Medical Congress in Madrid.—The central committee of Europe having in charge the interests of the International Congress of Medicine, to be held in Madrid, April 23 to 30, has named the Voyages Pratiques of Paris as the official agency to make all arrangements for the transportation and lodging of those attending the congress, to furnish membership tickets, and to organize and conduct a series of tours through Spain. The Voyages Pratiques are authorized to make the bookings for express trains, sleeping cars, hotels, and private lodgings. The regular trains being few in number and always overcrowded, it has arranged for a number of special trains, but since places in these will be filled early, those who expect to attend the congress should make their applications as soon as possible, to insure accommodations. This is especially advised, owing to the extreme difficulties of travel in Spain, and the overcrowding and irregularities which may occur unless proper precautions are taken. The Voyages Pratiques are enabled to offer members the advantage of 50 per cent. reduction on the railways, for round trip tickets. In order to facilitate the arrangements of the American physicians and scientists who expect to attend the congress, and to centralize the correspondence in this country, the Voyages Pratiques have appointed the tourist firm, Dr. and Mrs. Howard S. Paine, of Glens Falls, N. Y., as their American representative, with full authority to act for them in all the capacities enumerated above. Address all inquiries for information to Dr. and Mrs. Howard S. Paine, 148 Ridge street, Glens Falls, N. Y.

Death-Rate In Guatemala and In New Zealand.—Guatemala, with a mortality of 41 in 1,000, is said to be the least healthful country in the world; while New Zealand has the lowest death-rate, 11 in 1,000.—(*Medical News.*)

Sarcoma of the Shoulder.—Dr. J. Alex. Hutchinson reported to the Canadian Medical Association an amputation of the shoulder for sarcoma at the joint, with a successful termination. There was a history of previous injury to the shoulder, followed by the development of a growth in the head of the humerus, accompanied by intense pain. An X-ray examination of the parts revealed the presence of a large growth which invaded the joint, and involved the scapula. The patient was in an extremely unsatisfactory condition for operation, and presented evidence of marked cardiac disease, but was nevertheless subjected to operation. The incision extended from the middle of the clavicle in front down over the pectoral regions to the lower part of the axilla, and behind, passing over the scapula down to meet the anterior incision. After severing the middle of the clavicle, the great vessels were ligated, the brachial nerves divided high up, the muscles divided and the scapula freed from its attachments. There was little hemorrhage and the wound healed readily. Microscopic examination of the growth showed it to be a mixed spindle and round-celled myeloid sarcoma.—(*American Journal of Surgery and Gynecology.*)

Nitroglycerine for Muscular Spasms. Dr. H. E. Randall, in *Prescription*, declares that nitroglycerin is one of our most valuable drugs, but it should always be used with caution, and with knowledge of exactly what it is desired to accomplish. In muscular spasms, as in hystero-epilepsy, puerperal eclampsia, tetanus, spasmodic asthma, as well as in renal and gallstone colic, nitroglycerine promptly relieves some of the cases. In paroxysms of hysteria, with cold hands and feet, it acts like magic. The drug in hysteria is worthy of a more extended trial. The writer usually gives it in one one-hundredth or one-fiftieth grain tablets, repeated in five minutes if necessary.

DETROIT MEDICAL JOURNAL

A MONTHLY EPITOME OF
PRACTICE AND THERAPEUTICS

FRANK BURR TIBBALS, M. D., Editor

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MEDICAL LEGISLATION.

The upward trend of requirements for practice is well illustrated in the Nottingham bill, now before the Michigan legislature. This bill is designed to supplement and strengthen the existing medical law, passed in 1899.

The important features of the new bill are: A higher standard for students beginning the study of medicine; an examination of all applicants for registration as Michigan practitioners; the deprivation of Osteopaths of privileges granted them under the present act, and the exclusion of Canadian graduates who have not spent one year in an American medical college.

The avowed purpose of the bill is to promote relations of reciprocity with other states by adopting a standard as high as that of any of them.

We understand that the bill meets the approval of the practitioners of sectarian medicine, and also of the various medical colleges in the state; hence the principal opposition to the passage of the bill will probably come from the Osteopaths, who, while claiming not to practice medicine, appear to desire to do so.

The exclusion of Osteopaths from the ranks of medical practitioners is eminently just, until they meet in their

schools the four-year educational requirements for other practitioners. When they are educated as physicians should be, if they still prefer their "system" they have the same legal right to it as the Homeopath or the Eclectic. Some objection has been made to the portion of the bill relative to Canadian practitioners, which, to some, savors of retaliation. As a matter of fact, the standard of requirements in the Nottingham bill and those in the Ontario medical act are identical, except that Ontario requires of the graduate one year's experience, half of which may be with an authorized practitioner, the remainder hospital or post-graduate work.

Why, then, should there not be reciprocity between Michigan and Ontario, when the two standards are identical? But Ontario at present requires a year's attendance at one of her schools from every American graduate, according to Polk's Medical Directory of 1902.

The enforcement of the same provision in Michigan would lead either to a subsequent modification of both acts, on a reciprocal basis, or would send many Canadian students to Michigan colleges for at least a final year.

On the whole, the Nottingham bill is a long step forward, and it should be enacted into law without material modification.

THE VALUE OF MEDICAL SOCIETIES.

The question is often asked, of what value to the individual practitioner is membership in a medical society? We maintain that an active membership is of great direct practical value to the individual, from which benefit indirectly accrues to his brother practitioners and to his patients.

The average man swings his shingle to the breeze, equipped with ambition and hope, but with his brain overstocked with a mass of unclassified data, largely the-

oretical in character, needing ten years of practical experience to sort out the rubbish. To him the medical society is a post-graduate school, with the older men as teachers. He is stocked with new theories, they with experience, from the happy combination of which evolves the successful practitioner. He should therefore find his friends and advisers and his incentive to earnest effort in the example of his confreres. Hence the medical society is an invaluable aid in developing the graduated *embryo* into the full-fledged *doctor*.

To the older practitioners the need and the profit is not less. He is busy in active work, with limited time for reading and study, and becomes a "back number" just as rapidly in the city as in the woods, but for the burnishing at his command in rubbing against his fellows. He can learn theory from the well-taught recent graduate and practice from the older man, just as he can in turn contribute from his experience.

Let it be understood that we are talking about *active* membership. The man who goes to listen, learns, but the man who takes part learns more, for the resumé of the literature or study of cases essential to the proper preparation of a paper, or intelligent discussion, helps directly the man who does it.

Another function of the medical society is the inculcation of ethical ideas. The condemnation on the part of medical societies of newspaper advertising, division of fees, criminal practices and other evils of this commercial age, deters many men from unethical acts, not through the mere fear of expulsion, but because they want the commendation and dread the condemnation of their associates.

As a matter of fact, society makes its own laws largely by the power of public opinion. Society condemns crime, drunkenness and immoral conduct, and more men are good because public opinion con-

demns evil than because they imbibed any innate goodness with their mother's milk or inherited a father's strength of character. And to this common law medical men are no exceptions.

Lastly, the medical society benefits the entire profession by the power of organization, on the "little drops of water, little grains of sand" principle, and we are about to obtain, in the near future, things heretofore impossible of attainment, through the organization of the profession now under way all over the country.

EDITORIAL NOTES

A recent issue of the *Philadelphia Medical Journal* contains one of the most screaming bits of humor that we have read in the medical press for some time. It is a piece of writing calling down opprobrium on the head of Mark Twain. An excerpt will show its nature: "But Mark Twain shows his weakness, both as a prophet and a critic, in what he says about the claim of Mrs. Eddy's religion to be the real thing. 'Its great offer,' he says, 'is to *rid the race of pain and disease*.' This preposterously impossible program seems to Mark Twain to be quite a practical business, and one in the achievement of which Mrs. Eddy's religion will have no doubt and no difficulty whatever. In other words, Mr. Clemens himself comes so near to being a follower of Mrs. Eddy that he has not critical insight enough left to see that her claim to be able to abolish disease is the gist of the whole humbug. He already says that Christian Science can abolish *four-fifths* of the disease that affects mankind! Clearly, Mark Twain is already four-fifths Eddyite, and of all the blatherskite he has ever written his latest is a little

the most senile." This is what Mr. Squeers would call "richness." Anyone with a healthy sense of humor who has read even a trifle of Mr. Clemens' crusade against Mrs. Eddy and her followers must appreciate it. It would seem that the writer in the Philadelphia journal has done what David Harum advised his sister not to do, and has caught cold in his sense of humor. "Blatherskite," indeed!

The last meeting of the Quarter Century Club was held at the Fellowcraft Club last month. The club is made up of men who have been practicing medicine for twenty-five years or more and the meeting in question took the form of the sixth annual banquet of the organization. Dr. Henry A. Cleland was master of ceremonies, and Dr. Justin E. Emerson and Dr. A. E. Carrier were the toastmasters. The committee in charge of the arrangements for the banquet was composed of Dr. E. L. Shurly, Dr. Leartus Connor and Dr. Justin E. Emerson, and they were voted a most successful triumvirate. Dr. Flemming Carrow, of Ann Arbor, was a guest of the club.

The following programme of toasts was presented: "Inability," Dr. Peter Klein; "The Present Time," Dr. George B. Russell; "Living," Dr. Leartus Connor; "Talking," Dr. H. A. Cleland; "Pride," Dr. E. W. Jenks; "Age," Dr. M. H. Andrews; "Passions," Dr. Johann Flintermann; "Dogs," Dr. E. L. Shurly; "Love," Dr. S. P. Duffield; "Labour," Dr. Robert A. Jamieson; "Cranks," Dr. David Inglis; "Circumstances," Dr. C. A. Devendorf; "Nymphs," Dr. Eugene Smith; "Thought," Dr. J. J. Mulheron; "Kisses," Dr. Daniel La Ferte; "Care," Dr. N. W. Webber; "Song," Dr. J. B. Book; "Happiness," Dr. Hermann Kiefer; "Friends," Dr. B. R. Hoyt; "Blushing," Dr. M. J. Spranger; "The Wise Man," Dr. H. E. Smith; "Silence," Dr. H. O. Walker.

One of the many examples of the way in which matters are exaggerated in America is shown in the statements made in the lay press about the vast sums of money gained by Dr. Lorenz in America. Some papers put it as high as \$160,000 and the general impression was gained that the trip to America was an exceedingly profitable one for the doctor. In a recent interview, however, he strongly refutes the claim that his trip had been materially profitable. He states that he got one fee of \$30,000 (presumably from Mr. Armour) and that his fees for four months in this country amounted to a like sum. His private patients, he says, gave most of their fees to the physicians who operated on them after attending one of the Lorenz clinics. This is quite possibly so; but Dr. Lorenz himself feels that his trip to America has been of very great advantage to him from a medical and an ethical standpoint, and he has expressed himself as being greatly pleased with the kindness which he was shown by everyone in America with whom he came in contact. He will return to Vienna well pleased with the trip and its results. He has certainly gained in reputation by coming here.

Lemon juice, we are gravely informed, will positively destroy typhoid germs in water. "One experimenter" so a dispatch reads, "dropped a little lemon juice into a culture tube containing typhoid germs. To his amazement he found that the acid shriveled up and destroyed the germs." Lataer on, the same dispatch says: "Dr. Asa Ferguson, a practitioner of London, has just published an article in which he gives the results of experiments made by European scientists. These experiments have demonstrated that various acids will destroy germs, but as the acids will destroy human beings as well, no good result is practicable from their use." It is a fact that can be

demonstrated that a sufficiently hot fire will destroy germs; and building a fire inside a patient who was suffering from germs might well result in the destruction of the germs. The annoying fact that the fire would also probably destroy the subject of the experiment militates against a physician's chances for trying this method of germ extirpation on any but very feeble patients.

Dr. Ferguson also recommends that all drinking water shall have lemon juice in it, to the extent of a drop or two. That is, he does, if he is correctly quoted. There seems to be something wrong somewhere.

Philadelphia has received substantial aid in the matter of research concerning consumption, in the shape of a gift of \$300,000 from Henry Phipps, of New York, formerly a partner of Andrew Carnegie. The money will be used to establish an institution to be known as the "Henry Phipps institute for the study, treatment and prevention of tuberculosis." The institute will be so endowed as to have an income of about \$35,000 yearly. The whole plan includes the raising of a fund of \$1,500,000 for endowment purposes. The announcement of the generous gift was made by Dr. L. F. Flick, president of the Free Hospital for Poor Consumptives.

One of the features which are attractive about a paternal government is the interest which it takes in the health of the public. The Belgian government has recently issued a circular, addressed to the public, and having for its object the prevention of contagion. A chapter on venereal diseases is of especial interest. The language is plain, but without offense, and the dangers of syphilis and gonorrhœa are unmistakably pointed out. It is the first thing of the kind ever done by a government, and it is regarded by neighboring nations as an important step

in the fight against venereal disease in European countries. Belgium herself has been none too free from the results of unregulated morals for many years.

Interest in research work in cancer seems to be constantly on the increase, particularly in the British Islands. One of the recent steps taken to combat the disease is the project of J. K. Caird, a wealthy manufacturer at Dundee, Scotland, who proposes to erect a cancer hospital at a cost of \$90,000. He has also made arrangements for the payment of \$5,000 a year for five years for carrying out original laboratory work of investigation.

An exchange prints some interesting, if not very cheering, statistics on the financial side of medical practice of medicine in the French republic. It states that there are 2,600 doctors in the French capital, and that of these forty make from \$40,000 to \$60,000 a year; fifty make \$20,000; fifty make from \$10,000 to \$20,000; two hundred make from \$6,000 to \$10,000; two hundred make from \$4,000 to \$6,000; seventeen hundred make an average income of \$725. In all France there are reported to be 16,000 doctors, whose gross incomes average \$725 apiece. Apparently they are little better off in France than they are in America.

At the annual meeting of the authorities of Harper Hospital, on the evening of January 12, it was announced that Mrs. John H. Avery had agreed to give \$10,000 for the erection of a new building for diphtheria cases, in memory of her mother, Mrs. W. L. Smith. The old diphtheria building will be used for measles. The sum of \$20,000 is given by the estate of Hiram Walker for aid in the maintenance of the Farrand Training School, and the John E. King estate gives

\$10,000 for the endowment of two ward beds.

Corporations Not Professionals.—It is generally conceded that in a majority of the states a corporation cannot be organized or chartered to do a professional business. This applies as well to the medical as to the legal profession. A recent decision in a case appealed from a justice court in Omaha, Neb., is of interest to the profession. The State Electro Medical Institute brought suit against one L. N. Platner for services and recovered a judgment for the amount in a justice court. The case was appealed and the finding reversed, because, in the words of the court, "As a corporation cannot practice medicine under the state laws, it cannot collect for its services."—(*Medico-Legal Bulletin.*)

Chloroform The Tape-Worm.—In the December number of *Southern Practice*, Dr. James M. Clopton says that more than eighteen years ago, while practicing in St. Louis, Mo., he was a victim of tape worm, and had been for several years previously, and resorted to all the then prescribed remedies without benefit. Dr. William Porter then prescribed Squibb's chloroform 3ij in a number of large size capsules, with directions to take one every few minutes until well under the influence. Have a medical friend with you to note effects, etc., and when sufficient have been taken to produce stupor, then take an active purgative, such as salts and senna. "Before night came, I was parted from my old enemy; and since that time I have had the pleasure of relieving several patients of this most obnoxious depraved company. In my opinion, if properly given, it will never fail to so stupefy the worm" that it will turn loose its hold on intestinal wall, and its expulsion is made easy. "I have never heard of a failure with its use" when given in the manner indicated.

Watch the Salicylates.—Scheyer in *Weiner Medizinische Presse* reports the case of a laundress who was given .5 gm. sodium salicylate five times daily in the treatment of an attack of acute articular rheumatism. After a week's treatment symptoms of an affection of the middle ear developed and persisted notwithstanding the suspension of the drug, resulting in permanent deafness, complete in one ear and partial in the other.

Sodium salicylate and quinine should be given with caution in large doses, especially to those whose middle or internal ear is abnormal in any degree or in any way.—(*Medical Review of Reviews.*)

A Finishing Touch.—The wit of the elder Dumas is well known, and a recent issue of the *Lancet* gives a striking illustration of it. Gistal, a physician of Marseilles, was entertaining Dumas, and asked the author to write a sentiment in his autograph album. Dumas complied, as follows:

"Depuis que de docteur Gistal
Soigne des familles entières
On a demoli l'hôpital
Et l'on a fait deux cimetières.

The physician was immensely pleased with the first three lines, but the final one took all the wind out of his sails.

A Good Start Made.—Dr. E. F. Bashford, Assistant to Professor Sir T. R. Fraser, has been appointed Superintendent under the British Cancer Research Fund. Dr. Bashford, who has been working recently in Professor Ehrlich's laboratory at Frankfort, is acquainted with the cancer research work now being done in Germany, and will enter upon his duties forthwith. A special subcommittee on statistics is being formed, but the work of the general organization of the scheme is hampered by want of funds, as the sum as yet collected is only about £45,000.—(*Medical Review of Reviews.*)

NEW & INSTRUMENTS & DEVICES

Mention of new instruments and devices in this department is entirely complimentary and articles illustrated are judged on their merits.

We invite manufacturers and physicians to send us matter suitable for publication under this head. A description of the device and an electrotype or half-tone with a base not greater than two and five-eighths inches should be sent.

Always mention the price of the article in question.

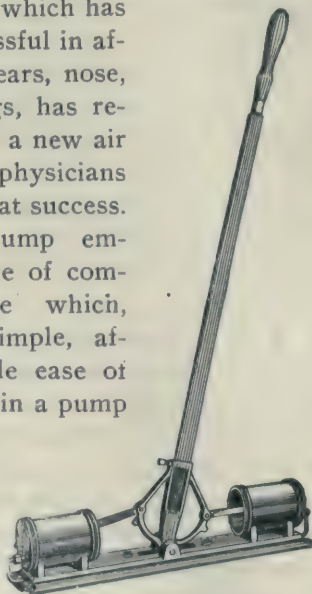
The management cannot undertake to return cuts unless postage for same accompanies the letter with which they are sent.

A NEW AIR PUMP.

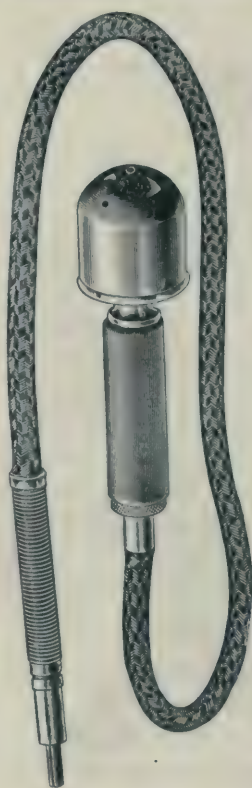
Dr. H. M. Dunlap, who, several years ago, first introduced the "vapor massage" treatment, which has proven so successful in affections of the ears, nose, throat and lungs, has recently perfected a new air pump, which physicians pronounce a great success.

This new pump employs a principle of compound leverage which, though very simple, affords remarkable ease of operation, even in a pump of large capacity, accomplishing equal results in the same length of time with less than one-third the effort required by the ordinary double cylinder lever pump.

Every physician who uses or contemplates using compressed air will be interested in this pump, as shown in accompanying cut.



MASSAGE HANDLE AND ATTACHMENTS.

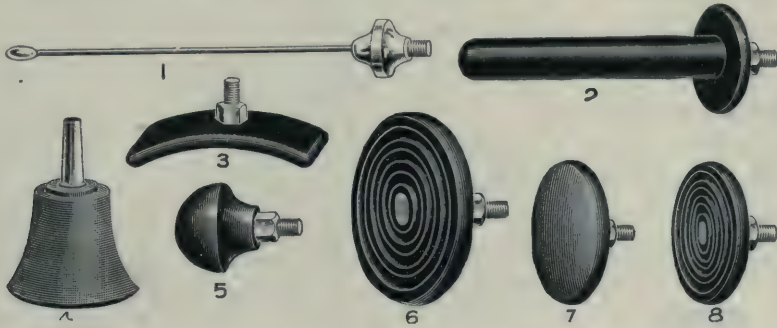


Modern practitioners are daily growing more and more in favor of vibratory massage, and therefore any new device which makes the application of such treatment simpler and more efficacious is likely to be of interest to them. We present herewith illustrations of some novel means of securing massage of the desired strength at any portion of the body. The massage handle illustrated is provided with a cable sheath and with a removable cap, which, when

Cut No. 1. taken off, exposes a regulating device, by means of which the strength of the vibrations can be perfectly controlled, so that every degree of movement, from the most gentle to the most vigorous, may be secured. The cap is also fitted with attachments into which the various vibratodes may be fitted, in such a manner that they may be inserted so as to form a straight line with the handle or to form an angle with it. The vibratory motion itself is rotary, this having been found to be the most satisfactory method to pursue in the treatment of the mucous membrane. In abdominal massage, the handle is used as shown in the cut, without the necessity of any attachment at all. The handle, with all of the vibratodes shown below, except Nos. 4 and 6, is furnished at \$35.00, and the manufacturers sell a device by means of which the handle may be operated by a motor of any size for \$5.00. Vibratodes

Nos. 4 and 6, consisting of a soft rubber cone for face, head, etc., and a large corrugated hard rubber disc for abdominal massage, are furnished for \$1.50 and 75

Papier mache is the material of which the protectoron is made, and every particle of material of which it is constructed is treated antiseptically. The



cents respectively. Vibratodes of special shapes are also made by the same manufacturer.

THE RICHARDS PROTECTORON.

This device is designed for the protection of the penis, while the patient is suffering with gonorrhœa, syphylitic sores, or other venereal diseases, and it is claimed for it by its manufacturers that it



is the best thing of the kind on the market today. It certainly assures absolute cleanliness, a state of things which many physicians have found lacking in other devices for the same purpose, and its use has been recommended by a number of the leading physicians in this country.

device is a non-conductor of heat, and this fact renders it cool to the wearer. It is light and convenient, perforated to secure additional comfort, and retails for the sum of \$1.00.

HOOPER REST-SHEET AND STRAIT-JACKET.

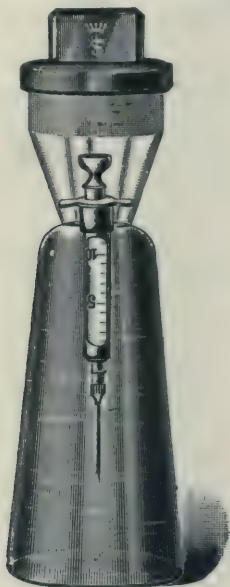
Delirious, violent or insane patients are a source of unending care and watchfulness, as every physician and nurse who has had charge of such cases knows. The purpose of this device, which is one of the best that we have seen, is to so restrain the patient that constant attendance will be unnecessary—and for this purpose it is admirably fitted. The edges, where they come in contact with the body of the patient, are lined with chamois skin, as are the straps which confine the limbs, so that as little discomfort as possible is caused the sufferer. Down each side of the sheet are five side straps, to confine the edges to a bed, cot or surgical table, and once they are secured patients are unable to do any injury to themselves or their attendants. Exposure on the part of the patient is impossible, for an apron covers the feet and the straps at the head and sides of the sheet prevent the head being raised. The greatest care has been taken by the manufacturer to turn out a device which shall hold a pa-

tient securely, but which shall not injure him in any way.

Not the least attractive feature of this useful and even necessary device is its low cost. The complete outfit, ready to apply to the obstreperous patient, costs \$10.00.

IMMERSION BOTTLE.

This bottle is designed to be useful in any procedure in which the frequent use of the hypodermic syringe is called for, as in the treatment of hernia by the injection method, etc. Its peculiar shape per-



mits the syringe to be wholly immersed in an antiseptic fluid, and the advantages of this must be evident to the practitioner. The bottle is made of Bohemian glass, six inches deep, and is provided with a ground-glass stopper, so fitted as to render the contents of the bottle thoroughly germ-proof. Aspirator needles, and other small articles may be kept in an aseptic condition by making use of this bottle. The solution remains sterile indefinitely, and the container, being made with a wide base, is not easily upset. Among the many advantages which such a bottle offers is the one of low price. It costs \$1.00.

Eighth Annual Meeting of the Western Ophthalmologic and Oto-Laryngologic Association.—At the meeting of this society, to be held in Indianapolis, Ind., on April 9 to 11, the following program of papers will be presented: Ophthalmologic—Dr. Adolph Alt, of St. Louis, Mo., "Episcleritis;" Dr. J. A. L. Bradfield, of LaCrosse, Wis., "Keratoconus: Etiology, Early Diagnosis and Treatment;" Dr. J. E. Brown, of Columbus, O., "Some Experiences in the Operation for Complicated Cataract;" Dr. A. E. Bulson, Jr., of Fort Wayne, Ind., "Hysterical Amblyopia, with Report of Cases;" Dr. J. Elliot Colburn, of Chicago, Ill., "Clinical Experiences in the Management of Phoria Patients: Failures and Successes;" Dr. Lee Wallace Dean, of Iowa City, Ia., "Degenerate Ocular Changes Resulting from Consanguinity of Parents;" Dr. John A. Donovan, of Butte, Mont., "Electro-Cautery Treatment of Wounds and Ulcers;" Dr. George F. Fiske, of Chicago, Ill., "Series of Glaucoma Cases;" Dr. Ferd. C. Holtz, of Chicago, Ill., "On Some Points in the Operation of Cicatricial Ectropium;" Dr. Dudley S. Reynolds, of Louisville, Ky., "Blepharitis Marginalis;" Dr. W. S. Samson, of Lancaster, O., "Sarcoma of the Choroid;" Dr. E. O. Sisson, of Keokuk, Ia., "Rare Ocular Lesions in Scarletina;" Dr. Hamilton Stillson, of Seattle, Wash., "The Influence of Environment on the Eye;" Dr. George F. Suker, of Chicago, Ill., "Paresis and Paralysis of the Muscle of Accommodation;" Dr. Cassius D. Wescott, of Chicago, Ill., "Retrolbulbar Optic Neuritis;" Dr. Casey A. Wood, of Chicago, Ill., "Excision of the Tarsus in Certain Forms of Chronic Trachoma." Oto-Laryngologic—Dr. Wm. L. Ballenger, of Chicago, Ill., president's address; Dr. J. C. Beck, of Chicago, Ill., "Superheated Medicated Air in Diseases of the Nose and Ear;" Dr. Fayette S. Ewing, of St. Louis, Mo., "Progress in Otology in Fifty Years

Past;" Dr. Hal. Foster, of Kansas City, Mo., "Report of Cases of Laryngeal Paralysis Due to Aortic Aneurism;" Dr. M. A. Goldstein, of St. Louis, Mo., "An Unusual Case of Spontaneous, Bilateral Hemorrhage from the Ear;" Dr. George F. Keiper, of LaFayette, Ind., "Present Status of the Treatment of Mastoiditis;" Dr. Robt. Levy, of Denver, Col., "Middle-Ear Affections in Tuberculosis;" Dr. Eugene R. Lewis, of Dubuque, Ia., "Pseudo-Torticollis, with Abnormal Associated Movements of the Head and Eyes;" Dr. Charles E. Means, of Columbus, O., "Tinnitus Aurium;" Dr. T. W. Moore, of Huntington, W. Va., "Some Cases of Asthma Treated by Removal of the Middle Turbinate;" Dr. Edwin Pynchon, of Chicago, Ill., "The Principles of Rhinologic Practice;" Dr. James E. Schadle, of St. Paul, Minn. (by invitation), "Inflammatory Conditions of the Upper Air-Tract, As They Occur in the Northwest;" Dr. E. L. Shurly, of Detroit, Mich. (by invitation), "Remarks on Etiology of Hypertrophic Rhinitis;" Dr. O. J. Stein, of Chicago, Ill., "A Discussion on the Differential Diagnosis and the Treatment of Osteo-Sclerosis of the Mastoid Process;" Dr. J. A. Stucky, of Lexington, Ky., "Naso-Pharyngeal Fibroma—Exhibition of Photographs and Specimens."

Physicians May "Take the Veil."—The *Therapeutic Gazette* describes as follows a veil mentioned by Wenzel in the *Centralblatt fuer Chirurgie*: It is a "simple gauze veil which is to be worn during operations and which prevents the moisture from the breath, drops of perspiration, and particles from the hair and beard from falling into the wound.

"The veil is composed of a triple layer of narrow-meshed gauze, thirty-two inches long and twenty inches wide. A slit eight inches long is cut in the transverse axis of the veil at a distance of twelve inches from one end. A short

piece of tape is fastened to the veil at each end of this slit.

"The veil is applied by placing the slit opposite the eyes and carrying the long end up over the head and down the back of the neck, while the short end is permitted to fall over the nose, mouth and chin. The upper part of the veil is secured by tying the tapes back of the occiput, and the free ends of the veil are held in place by buttoning the collar of the operating gown over them. The veil completely encloses the head except at the opening for the eyes. It does not impede respiration, and is sufficiently thick to absorb all the moisture from the expired air. It is easily sterilized, and is so inexpensive that it can be thrown away after being used once."

Cause of Neoplasms in Malignant Growths Unknown.—We are not quite willing to go with the Harvard commission as far as some of their conclusions. We can readily see that Richardson's negative results do not prove that a parasite does not exist which resists cultivation on our known media, nor do we care, at the present stage of the investigation, whether the parasite is a blastomyces or protozoa. We are willing to admit that urotozoa-like bodies are found in cancerous tissue, but this fact does not establish the etiologic relation of these "parasites" to cancer. It may be readily conceived how various parasites may accidentally contaminate tumors which are exposed to the external air; or these parasites may occur as a secondary invasion and, perhaps, determine the greater rapidity of the growth and the cachexia. It is also possible that in certain cases the parasites form the source of irritation which excites the predisposed cells to anarchy, just as any other irritant may do; but what the primary cause of neoplasms in general and malignant growths in particular is, we are at present unable to say.—

(Dr. A. Robin, in *International Medical Magazine*.)

Roentgen Method In Cancerous Growths.—Four cases of disease of the breast, that represent four varieties of inoperable malignant tumors, also show the efficiency of this method. The most remarkable results were shown in a carcinoma that had been operated upon three and one-half years before. The right breast had been removed and a recurrence had taken place two years later in the line of the scar and in the left breast. There were numerous ulcerated areas along the scar, while the area over the sternum was indurated and ulcerated. The mass in the left breast measured seven and one-quarter inches from the inframmary fold to an axillary fold, the line passing through the nipple. All the indurated and ulcerated areas along the line of the scar and over the sternum have healed, and the tissue has become normal. The mass in the left breast has softened, and the measurement indicated has decreased over two inches.—(Dr. Charles Lester Leonard, in *International Medical Magazine*.)

Foreign Bodies in the Appendix.—At the Canadian Medical Association, 'Dr. James Bell, of Montreal, read a paper on this subject in which he expressed the opinion that appendicitis never depends on the presence of foreign bodies in the lumen of the appendix. There is little doubt, however, that when foreign bodies gain entrance accidentally into the appendix, they aggravate an otherwise septic infection. Among the foreign bodies which he has found in the appendix are, in two cases pins, in two cases seeds, in one case wood-fiber, in one case gall-stone, and in another case a fish-bone.—(*American Journal of Surgery and Gynecology*.)

The Index Medicus.—It is a pleasure to note that an *Index Medicus* is to be re-established and under such auspicious circumstances that its permanency is assured. The Carnegie Institution of Washington will be the publishers. The new publication aims to continue the former *Index Medicus*. It will be issued monthly and purposes to contain the titles in full of books, pamphlets, theses, contributions to co-operative works and original articles in journals, transactions of medical and scientific societies and the like, arranged under subject headings. It will represent the literature of the preceding month of medical publications, both at home and abroad, its issue being delayed sufficiently to allow for the arrival of foreign journals.—(*Brooklyn Medical Journal*.)

Colonist Tickets.—On the first and third Tuesday of each month until April 30, 1903, one-way second class Colonist tickets will be sold by the Chicago, Milwaukee & St. Paul Railway from Chicago to points in South Dakota, North Dakota, Nebraska, Kansas, Eastern Colorado, Texas, Oklahoma, Indian Territory and Southwestern Missouri, at about one-half regular rates.

During the same period round-trip Homeseekers' excursion tickets will be sold by the Chicago, Milwaukee & St. Paul Railway on the first and third Tuesday of each month, good to return within 21 days from date of sale, to many points in Iowa, Minnesota and South Dakota, North Dakota and other western and southwestern states.

For further information apply to any coupon ticket agent, or address Robt. C. Jones, Michigan Passenger Agent, Detroit, Mich.

An Easy Prescription.—"Do you know what I can take for indigestion after dinner, doctor?"

"Yes. Pie."—(*Yonkers Statesman*.)

BOOK REVIEWS

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, Etc., etc.; Assisted by H. R. M. Landis, M. D., Assistant Physician to the Out-Patient Medical Department of the Jefferson Medical College Hospital. Volume IV. December, 1902. Diseases of Digestive Tract and Allied Organs: Liver, Pancreas, and Peritoneum—Anæsthetics, Fractures, Dislocations, Amputations, Surgery of the Extremities, and Orthopedics—Genito-Urinary Diseases—Diseases of the Kidneys—Physiology—Hygiene—Practical Therapeutic Referendum. Pages, 409. Lea Bros. & Co., Publishers, Philadelphia and New York.

This volume completes a series for the year which any physician would be entirely justified in keeping on the shelves of his library in that portion devoted to books which he looks at the most often. A successful physician must keep abreast of the times, and these four books will do much to help him to do this. Attention has already been called to the admirable work of editing that Hare and his assistant have done. The present volume fully sustains the estimate we have already placed on their work.

The contents of the December issue is as follows: Diseases of the Digestive Tract and Allied Organs, the Liver, Pancreas and Peritoneum, Max Einhorn, M. D.; Anæsthetics, Fractures, Dislocations, Amputations, Surgery of the Extremities and Orthopedics, Joseph C. Blood-

good, M. D.; Genito-Urinary Diseases, William T. Belfield, M. D.; Diseases of the Kidneys, John Rose Bradford, M. D., F. R. C. P.; Physiology, Albert P. Brubaker, M. D.; Hygiene, Charles Harrington, M. D.; Practical Therapeutic Referendum, E. Q. Thornton, M. D.

A Manual of Dissection and Practical Anatomy, founded on Gray and Gerrish. By William T. Eckley, M. D., Professor of Anatomy, and Corinne B. Eckley, Demonstrator of Anatomy in the Medical and Dental Departments of the University of Illinois. One octavo volume of 400 pages, illustrated with 220 engravings, 116 of which are colored. Cloth, \$3.50 net. Lea Bros. & Co., Publishers, Philadelphia and New York.

For the student who wishes to provide himself with a detailed guide for dissection, and for the surgeon who desires to review the anatomy of any region, this book will be found admirably suited. It has been written in such a manner that it may be used with either Gray or Gerrish, and the illustrations found in this manual are largely taken from the works of these two standard authors. The engravings are large-sized, and colored plates add much to the attractiveness of the book as a publication and to its usefulness as a guide.

Recognizing that tabulation is one of the most acceptable methods for the clear and systematic presentation of anatomical data, the authors have arranged tables for each of the divisions of the body treated in the text, with the result that a clear and easily understood exposition of nerves, muscles, veins, arteries and so on is given. Careful editing has reduced the size of the book considerably, without leaving out the essentials; and the whole work has been done with great care, to the end that a satisfactory book might be prepared.

Medical Microscopy. Designed for Students in Laboratory Work and for Practitioners. By T. E. Oerth, M. D., Professor of Histology, Pathology, Bacteriology and Clinical Microscopy, Medical Department, University of Georgia. With 131 illustrations, some of which are colored. Pages, 350. Price, Cloth, \$2.00 net. P. Blakiston's Son & Co., Publishers, 1012 Walnut St., Philadelphia, Pa.

Every beginner in the important study of microscopy will find much interest in this book. The author has reduced the text as much as possible without leaving too much to the imagination, and he has avoided giving too many methods for the student to pursue in carrying out a given procedure. In this way the student's mind is free to grasp the important things, without being hampered by a mass of detail which may prove, to a large extent, useless. The comparatively recent attention which is being paid to laboratory work by our schools and colleges makes it reasonable to suppose that there must be many in the profession who are not over well equipped for work with the microscope, while the necessity of a knowledge of the microscope for the modern practitioner is growing every day.

Oerth begins with the first principles, and he gives a careful description of each piece of apparatus and each point of technique involved in the scientific use of the microscope in medicine. The illustrations are good, and the tables of stains, and so on are excellent.

Lea's Series of Medical Epitomes. Schalek on Dermatology. A Manual of Skin Diseases for the Use of Students and Practitioners. By Alfred Schalek, M. D., of Rush Medical College, Chicago. One handy 12mo Volume; 225 pages and 34 Illustrations. Cloth, \$1.00 net. Lea Bros. & Co., Publishers, Philadelphia and New York.

This is another of the handy little books in this series, which is edited by Dr. V. C. Pedersen. Schalek has crowded a great many interesting facts into his little book, arranging the diseases alphabetically for greater convenience and condensation, and taking up the etiology, symptomatology, course, treatment and prognosis of each. A number of illustrations that really illustrate, many of them from photographs, are of great assistance. A number of questions follow the description of each disease, for the use of the student, in order that the chief points of the text may be made emphatic. The series is undeniably convenient and, for the size of the books, exhaustive. We can recommend them.

The Mattison Method in Morphinism. By J. B. Mattison, M. D., Medical Director, Brooklyn Home for Narcotic Inebriates. Price, \$1.00. Published for the Author by E. B. Treat & Co., New York, 1902.

This little monograph is dedicated to Dr. Joseph Parrish, who first directed Dr. Mattison's attention to the work in which he has been interested for the past thirty years. It contains a description of the author's methods in treating morphine drunkards.

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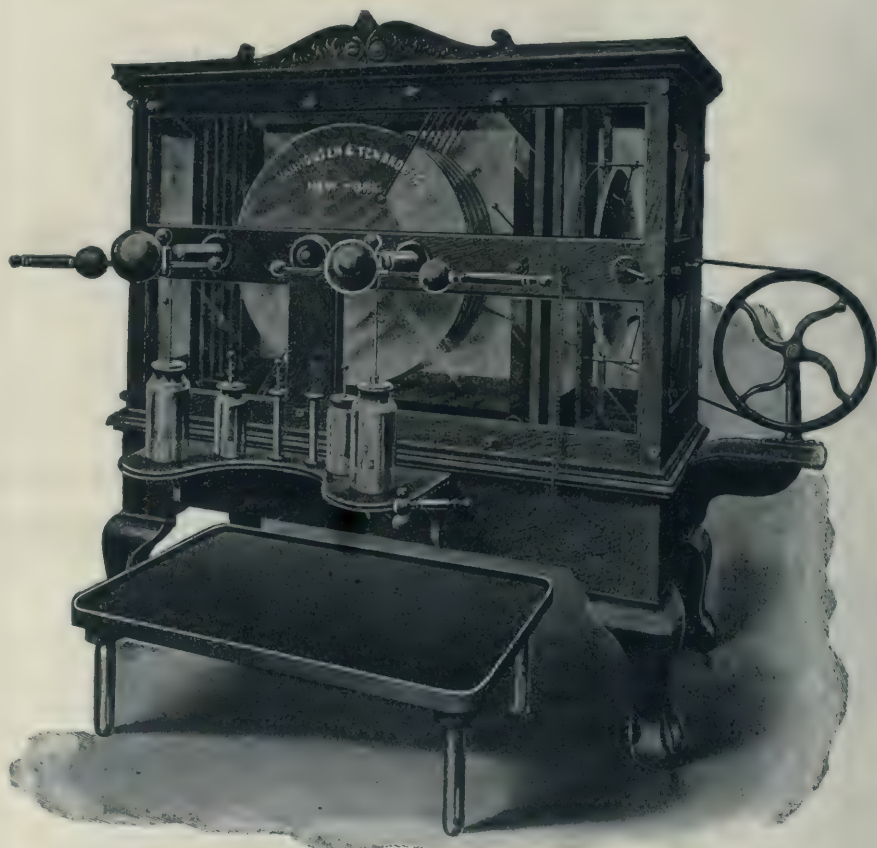
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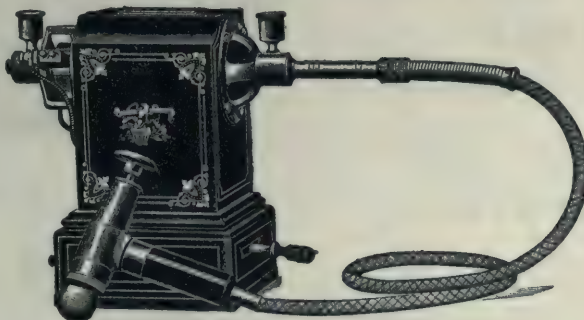
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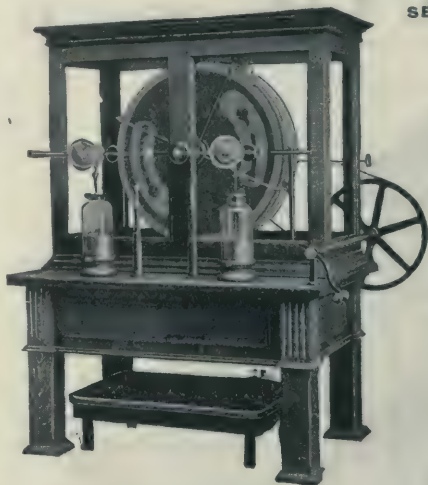
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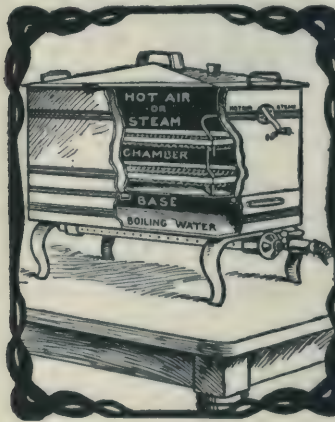
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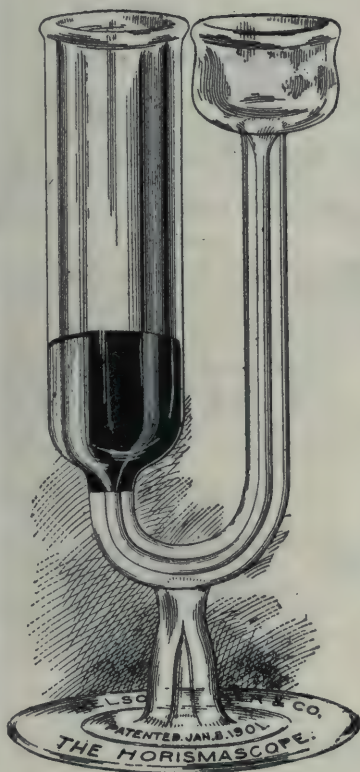
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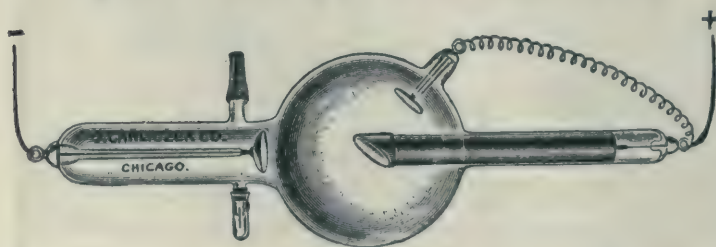
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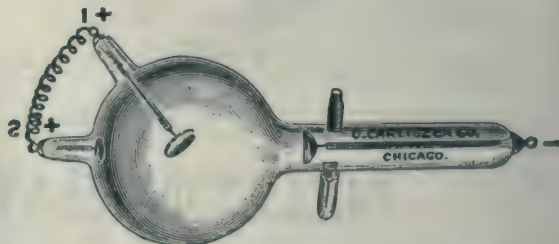
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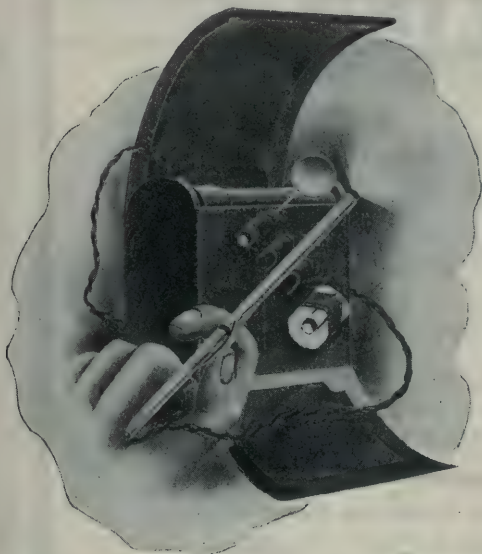
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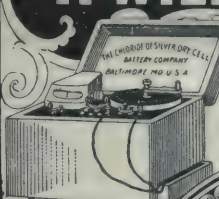
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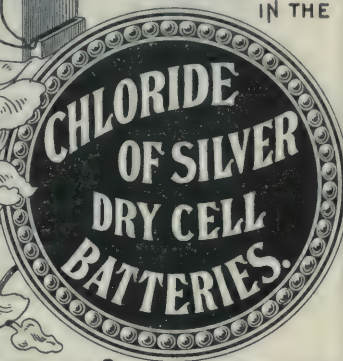
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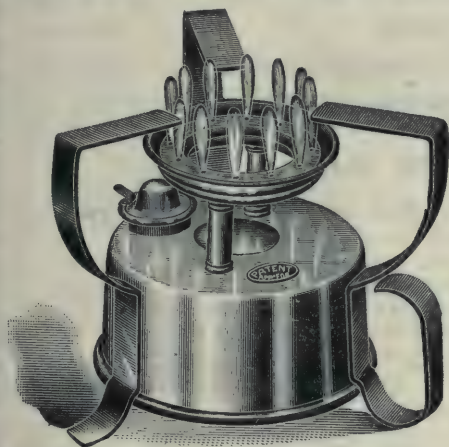
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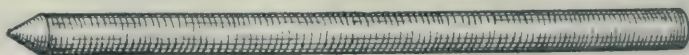
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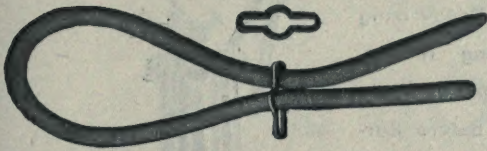
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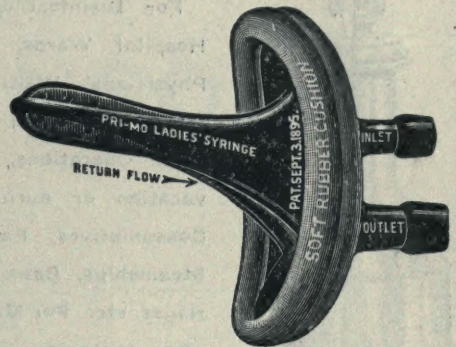
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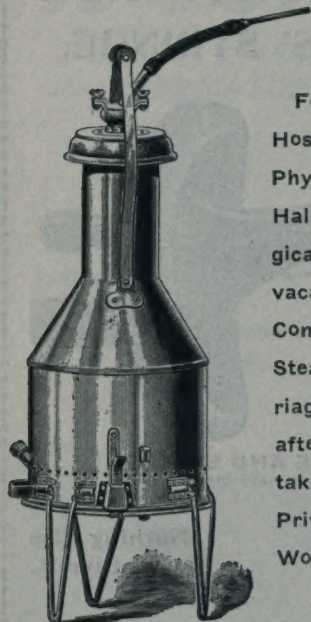
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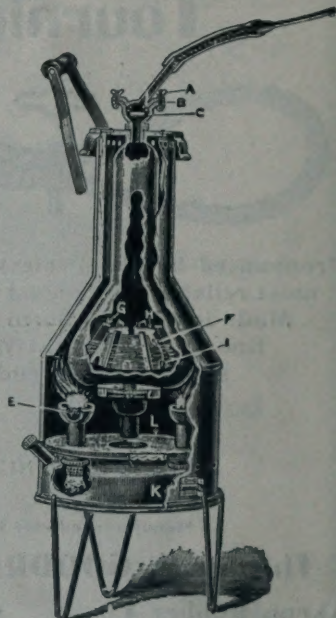
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